CORPORATE GOVERNANCE MECHANISMS, FIRM'S CHARACTERISTICS AND CAPITAL STRUCTURE IN NIGERIAN LISTED FIRMS

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ABSTRACT

Studies on the influence of corporate governance mechanisms on capital structure decisions in the emerging markets are still very limited. This study examined the influence of corporate governance mechanisms, firm characteristics and macroeconomic variables on capital structure of Nigeria non-financial listed firms. Unlike the vast majority of previous studies, this study employed *panels corrected standard errors* (PCSEs) model to analyse the relationship between corporate governance mechanism, firm characteristics and macroeconomic variables on capital structure of 106 Nigerian non-financial listed firms during the 2012 to 2016 period. The model was robust to any unit heterokedasticity and possible contemporaneous correlation issues. The results revealed that board structure (board size, board meeting and board independence) and ownership structure (managerial and institutional ownership) were negatively related to the total debt ratio, whereas block-holder ownership and firm characteristics (firm age, firm size and firm growth) were positively related. In addition, the choice of external auditor (B4 audit firm) had no significant relationship to the total debt ratio of the sample firms. Control variables namely GDP and inflation rate were negatively related to the total debt ratio, whereas bank lending rate was positively related. Corporate governance in Nigeria is at its developing stage, the firms still has weak corporate governance mechanisms as compared to firms in developed countries. The study found that, corporate governance attributes and firm characteristics partly explained the capital structure of Nigeria firms. Nigeria firms' manager should be aware of the benefits on the implementation of effective corporate governance monitoring mechanisms. An effective implementation of the Corporate Governance Code 2011 issued by Security and Exchange Commission should improve the efficiency and effectiveness of Nigeria firms and the stock markets. To the author's best knowledge, this study is among the few studies that utilised *panels corrected standard errors* model in providing evidence of the influence of corporate governance mechanisms and firm characteristics on capital structure in Nigeria.

Keywords: capital structure, corporate governance, firms' characteristics, Nigeria, ownership structure.

ABSTRAK

Kajian tentang pengaruh mekanisma tadbir urus korporat terhadap keputusan struktur modal dalam pasaran baru muncul adalah masih sangat terhad. Kajian ini meneliti pengaruh mekanisma tadbir urus korporat, ciri-ciri syarikat dan pemboleh ubah makroekonomi terhadap struktur modal syarikat bukan kewangan Nigeria yang tersenarai. Tidak seperti kebanyakan kajian lepas, kajian ini mengunakan model *panels corrected standard errors* (PCSEs), untuk menganalisis hubungan di antara mekanisma tadbir urus korporat, ciri-ciri syarikat dan pemboleh ubah makroekonomi terhadap struktur modal di 106 buah syarikat bukan kewangan Nigeria yang tersenarai pada tahun 2012-2016. Model ini adalah kukuh bagi mana-mana *heterokedasticity* unit dan isu korelasi komtemporari yang sesuai. Hasil kajian menunjukkan struktur lembaga (saiz lembaga, mesyuarat lembaga dan kebebasan lembaga) dan struktur pemilikan (pemilikan pengurusan dan institusi) berkaitan secara negatif kepada nisbah jumlah hutang, dan pemilikan pemegang blok dan ciri-ciri syarikat (umur syarikat, saiz syarikat dan pertumbuhan syarikat) pula berkaitan secara positif. Tambahan lagi, pemilihan juruaudit luar (firma audit B4) tidak mempunyai hubungan yang signifikan kepada nisbah jumlah hutang syarikat sampel. Pemboleh ubah kawalan iaitu KDNK dan kadar inflasi mempunyai perkaitan yang negatif kepada nisbah jumlah hutang, dan kadar peminjaman bank pula berkaitan secara positif. Pentadbir urus korporat di Nigeria berada pada tahap yang pembangunan syarikat-syarikatnya mempunyai mekanisma tadbir urus korporat yang masih lemah berbanding dengan syarikat-syarikat di negara-negara membangun. Kajian mendapati, sifat tadbir urus korporat dan ciri-ciri syarikat sebahagiannya menerangkan struktur modal syarikat-syarikat di Nigeria. Pengurus syarikat di Nigeria perlu sedar mengenai faedah pelaksanaan pemantauan mekanisma tadbir urus korporat yang berkesan. Pelaksanaan Kod Tadbir Urus Korporat 2011 yang berkesan oleh Suruhanjaya Keselamatan dan Pertukaran perlu meningkatkan kecekapan dan keberkesanan syarikat-syarikat dan pasaran saham Nigeria. Kajian ini merupakan antara kajian yang menggunakan model *corrected standard errors* untuk memberikan bukti mengenai pengaruh mekanisma tadbir urus korporat dan ciri-ciri syarikat terhadap struktur modal di Nigeria.

Kata kunci: struktur modal, tadbir urus korporat, ciri-ciri syarikat, Nigeria, struktur Pemilikan.

DEDICATION

This thesis is dedicated to **the Almighty Allah,** the most beneficent, the most merciful for His benevolence and mercies towards me and my entire family,

And to

My beloved father, **Mallam Aminu Abdulsalam** for the unadulterated maternal care I enjoyed from cradle till the cold hands of death touched him. May Almighty Allah (SWT) forgive him and grant him al-jana fridaus (Aamin).

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Big 4	Big four Audit Firms (Deloitte, Ernst & Young, KPMG, and PricewaterhouseCoopers)
BLR	Bank lending rate
CBN	Central Bank of Nigeria
CEO	Chief Executive Officer
CG	Corporate governance
CGMs	Corporate governance mechanisms
CPI	Consumer Price Index
CS	Capital structure
CSD	Capital structure decision
DR	Debt Ratio
KPMG	Klynveld Peat Marwick Goerdeler
LTDR	Long term debt ratio
NSE	Nigeria Securities Exchange
OLS	Ordinary Least Squares
PCSEs	Panels Corrected Standard Errors
PPP	Purchasing Power Parity
SEC	Securities and Exchange Commission
STDR	Short term debt ratio
TDR	Total debt ratio

CHAPTER ONE

INTRODUCTION

1.1 Background and Motivation of the Study

Amongst a firm's strategic decision making processes, the capital structure decision process is the most noticeable and essential process, and that is why it is a heated issue in corporate finance (Myers & Majluf, 1984; Bolton, 2016). Shafana (2016) explained that, the aim of the corporate finance decisions are to maximise the shareholders' wealth. This is achieve through four major corporate finance decisions, namely, decisions on the dividend, working capital management, budgeting, and capital structure. Shafana (2016) argued further that, amongst these various corporate finance decisions, the capital structure decision is a key decision leading to meet the other three corporate finance decisions.

The issue of capital structure started to generate a great interest continuously in accounting and finance, ever since the publication of the seminal paper of Modigliani and Miller (1958). Modigliani and Miller (1958) formulated a proposition that in a perfect capital market free of taxes, transaction cost, and other frictions, capital structure would be irrelevant in ascertaining firm value. This proposition, popularly known as the MM model, led to numbers of research works on capital structure with researchers examining the robustness of the model.

However, despite extensive empirical work and literature on capital structure (Myers & Majluf, 1984; Lemmon, Roberts, & Zender, 2008; Graham & Leary, 2011; Fama & French, 2012; Graham, Leary, & Roberts, 2014a, 2014b; and DeAngelo & Roll, 2015) the debate

on capital structure has yet to be settled. According to Al-Najjar and Hussainey (2011), the capital structure decision has been a conundrum for accounting and finance researchers. Supporting the statement, Hussainey and Aljifri (2012) also argued that this conundrum is due to the fact that the determinants of the capital structure decision are still indefinite.

How a firm develops the strategy of financing its growth and operations using different sources of financing is capital structure. However, the proportion of debt to equity (Debt/Equity) that gives an insight into how risky a firm is, is what financial analysts refer to as the capital structure (Booth, Aivazian, Demirguc-Kunt, & Maksimovic 2001). Myers (2001) explained that the mixture of equity and other sources of funds that the firms' use to finance its business activities is what capital structure is trying to explain. Sources of capital structure funds are from share capital (shareholders' funds) and creditors' funds. These sources are the make-up of the capital structure of the firm.

Myers (2001) further argued that a universal theory of capital structure is not in existence and there is no need to expect one, except for some situational theories. These situational or conditional theories are the ones that allow the stakeholders of the firm and the financial analysts to define the optimal value of the financing cost and the financial structure of a firm. Firms' optimal capital structures, on the other hand, are different in practice because so many corporate governance mechanisms, firm characteristics, and macroeconomic variables influence capital structure decisions (Gajurel, 2005).

Sound corporate governance principles are the foundation upon which the trust of investors and lenders is built. Therefore, to ensure the protection of the individual and collective interest of all the firm's stakeholders, effective mechanisms and philosophy that entail the processes and structure that will facilitate the creation of the shareholder value through the management of the firm's affairs is needed. Keasey, Thompson, and Wright (1997) described corporate governance as the process and structure used to direct and manage the affairs of a firm for the business prosperity and corporate accountability. Its ultimate objective is to realise long-term shareholder value, whilst taking into account the interests of other stakeholders.

The need for effective corporate governance mechanisms arises from the separation of ownership from the control which is generally associated with the existence of agency problems. According to modern corporate finance theories, agency cost is one of the determinants of capital structure; whereas, corporate governance is structured to alleviate agency issues (Agyei, & Owusu 2014). Thus, corporate governance and capital structure are linked through their association with agency costs (Hassan & Butt, 2009).

According to Uwuigbe (2014), agency problems arise as a result of the relationships between shareholders and managers and are based on conflicts of interest within the firm. When the owners and agents are separate entities, the relationships between them often bring conflicts of interest. According to Lessing (2009), corporate governance basically exists to provide the necessary checks and balances between owners and agents; this mitigates agency problems. Consequently, good corporate governance mechanisms will

serve as an active monitoring mechanism that will prevent the firm's management from adjusting debt to their own interests. Also, corporate governance mechanisms improve the alignment of the management and the shareholders' interests and mitigate any opportunistic behaviour, resulting from such conflict of interests (Kazemian & Zuraidah, 2015).

Craig (2005) explained that corporate governance is defined and practised in different ways, globally, depending upon the relative power of the owners and agents. It entails the procedures, customs, policies, and laws that affect the way firms are controlled, administered or directed. He further argued that an important objective of corporate governance is to ensure accountability and transparency for those who are involved in the policy implementation of the firm through mechanisms that will reduce principal-agent conflicts.

Keasey and Wright (1993) classified corporate governance mechanisms into internal and external mechanisms. The internal mechanisms include the board composition, audit committees, and managerial and non-managerial shareholdings, including the institutional and blocked shareholdings. External mechanisms include: the market for corporate control and stock market evaluation of corporate performance. Damak (2013), Gebba (2015), and Miko and Kamardin (2016) supported the two distinct classification of corporate governance mechanisms (internal and external mechanisms). The internal are means in the firm that can encourage managers to maximise the firm value. Those means are: board of

directors, ownership structure, audit committees, mutual monitoring, and supervisory board.

The external corporate governance mechanisms are those controls that are exercised through the external auditor and outdoor market, including: financial market, market goods and services, and labour market managers. Apparently, the study of the corporate governance mechanisms and capital structure will, therefore, give a tremendous strategic framework to the decisions on the firm debt ratio context. This study has been conducted to show the influence of internal corporate governance mechanisms (Board of directors, statutory auditor, and ownership structure) towards the firms' financial structures in Nigerian listed firms.

Most of the empirical studies on corporate governance are majorly concerned with the effect of good corporate governance on a firm's performance and also the effect of ownership structure on the firm's financial structure (Claessens, Djankov, Fan, & Lang 2002). Moreover, Graham and Harvey (2001), Livot (2005), and Bhagat and Bolton (2013) made further arguments regarding the concept of corporate governance mechanisms. They argued that, corporate governance mechanisms are also related with the firm's capital structure and other major corporate finance decisions. Liao, Mukherjee, and Wang (2012) supported this argument by saying that, with good corporate governance practice, firms will be able to manage their information efficiently and this normally helps in reducing the aggregate cost of capital which will effectively assist the firms to make effective and quicker capital structure decisions.

According to Muthama, Mbaluka, and Kalunda (2013), the influence of macroeconomic variables on the firm's capital structure is another current baffling issue for financial managers. Empirical research evidence, such as Booth, et al. (2001); Gajurel (2005); and Muthama, et al. (2013), have proved that there is a linkage between the firm's capital structure and the country's macroeconomic variables. According to Gajurel (2005), major macroeconomic policies, such as monetary and fiscal policies, pursued by a country can significantly influence the firm's capital structure decisions. Gajurel (2005) further argued that a reduction in the country's GDP growth rate tends to cause firms to depend more on debt financing than equity financing. This is also similar to the findings of Booth, et al. (2001). More recent work in the African context by Muthama, et al. (2013) implied that the GDP growth rate, interest rate, and inflation are major macroeconomic or external factors that can influence the decision on capital structure.

Prior research examined the effect of corporate governance mechanisms on corporate capital structure decisions. A few studies like Ezeoha and Francis (2010); Ganiyu and Abiodun (2012); Uwuigbe (2013); and Uwuigbe (2014), examined the relationship between the corporate governance mechanisms on the capital structure of the listed firms in Nigeria. However, to the best of this researcher's knowledge, there are still limited studies that examined the influence of corporate governance mechanisms and firm characteristics on capital structure decisions of non-financial listed firms in Nigeria.

The 2007/2008 global economic crisis has substantial influenced and caused fluctuations on the Nigerian macroeconomics. According to Peter (2015), the 2007/2008 global

financial crisis has had a significant impact on the Nigerian stock market in the short-run and long-run. The economy was brought down as the capital market in Nigeria crashed resulting in the loss of capital, assets, and investments (Peter 2015). In 2011, the Securities and Exchange Commission (SEC) in Nigeria reviewed its corporate governance code with the aim of providing the best corporate governance practices within the Nigerian listed firms. The introduction of the reviewed corporate governance code, known as the Code of Corporate Governance for Public Companies in Nigeria 2011, and the instability in the Nigerian macroeconomic variables, were amongst the recent issues in the Nigerian business environment. These issues motivated the researcher to conduct research on the influence of corporate governance mechanisms and firm characteristics on firm capital structure levels.

1.2 Problem Statements

A capital structure decision is a vital firm's management decision that greatly affects the shareholders' wealth, and the profitability and sustainability of the firm. Therefore, how a firm determines the mix of debt and equity is important to fund providers and managers, because a wrong mix of debt and equity can seriously affect the performance and the survival of the firm. Apparently, the firm's capital structure decisions involve a vast range of policy affairs within and outside the direct control of management of the firm. According to Green, Murinde, and Suppakitjarak (2002), micro and macro policy issues influence firms' capital structure decisions. At the micro level, there are the influences of corporate governance practices and firm characteristics; whilst at the macro level, there are the influences of capital market development, bank lending rate, security price determination,

and other monetary policy regulations (Green, et al. 2002). Therefore, for the firm's management to decide on the appropriate mix of debt and equity that will ensure that the firm continues as a going concern, micro and macro policy issues should be of great concern to the firm's management. Hence, the firm's financial choice is very vital to the ability of the firm to achieve the optimal needs of its stakeholders.

The recent global financial crisis and financial distress in many large firms around the globe have brought more concern to various firms' stakeholders (Lin, Hutchinson, & Percy, 2015). Researchers have argued that the high rate of collapses in firms is an outcome of weak corporate governance practices that could not benefit the firms for better access to financing, less cost of capital, better consideration for all the firms' stakeholders and better firm performance. (Palmrose, 2013).

However, according to Sheikh and Wang (2012), firms that have sound corporate governance mechanisms usually witness active growth and also grasp better opportunities in attracting capital from investors and lenders to smooth their business operations. Therefore, there is a need to look beyond the relationship between the firm's specific characteristics, (examples: firm size, profitability, growth, age, risk, tangibility, and liquidity) and capital structure decisions which are the bases of most of the recent empirical studies on capital structure (Buvanendra, Sridharan, & Thiyagarajan, 2017). The influence of corporate governance mechanisms is also a vital issue in making decisions on the firm's financial choice.

Scholars have examined the association between corporate governance mechanisms and capital structure (Hussainey & Aljifri, 2012; Nadeem & Sheikh, 2012; and Conyon & He, 2014). The general problem has been that there has been no agreement amongst the researchers on the extent of the relationship between corporate governance mechanisms and capital structure. The consequence of the inconsistency in the research findings is that corporate managers do not know, and may not be able to implement the best practices for corporate governance (El-Faitouri, 2014). However, the firm's managers need to be aware of the benefits of the implementation of effective internal and external corporate governance mechanisms.

As Africa's largest emerging economy, Nigeria has transformed herself into a large market oriented economy. As part of the transformation, in 2011, the Securities and Exchange Commission (SEC) in Nigeria reviewed its corporate governance code with the aim of providing the best corporate governance practices within the Nigerian listed firms, and also to improve investor confidence and trust in management and promote the economic development of the country.

Despite the above corporate governance code's review, Nigeria still presents challenges for corporate governance practices for a few reasons. First, according to Arowolo and Che-Ahmed (2016), reports of business mergers, bankruptcys and firm collapse in Nigeria in the last decade is very alarming which is due to insufficient monitoring and enforcement of the code of corporate governance. Secondly, Nigeria was recently ranked 148th out of 180 countries on Transparency International's Corruption Perceptions Index, indicating a

lack of transparency and widespread corruption in the corporate sectors. Also, institutional differences exist between developed markets and Nigeria's market. According to Rajagopalan and Zang (2008), these differences in business environments and practices, and the enforcement of the corporate governance code are the major gaps between the adoption of the corporate governance codes and the actual implementation of these codes. Hence, the efficiency of the reviewed corporate governance code and its impact on the capital structure decisions of firms in Nigeria need to be empirically investigated.

Most empirical research has focused on the impact of corporate governance mechanisms on performance. A great deal of the research that has analysed the influence of corporate governance mechanisms on capital structure had been carried out in developed countries (Anderson, Mansi, & Reeb, 2004; Berger, Ofek, & Yermack, 1997; Fosberg, 2004; Friend & Lang, 1988; and Mehran, 1992). Whereas, little is known about the developing countries that have different institutional structures (Abor, 2007; Bokpin & Arko, 2009; Kyereboah-Coleman & Biekpe, 2006; and Wen, Rwegasira, & Bilderbeek, 2002). Findings from a particular country may not represent the other countries, which have different economies and business environments; as such, further research is needed to test the robustness of the studies outside the developed countries.

According to Maher and Andersson (1999), corporate governance practices vary, not only across countries but also across firms and industry sectors. However, one of the most striking differences between the countries' corporate governance systems are in the ownership and control of the firms that exist across the countries. Yoshikawa, Zhu, and

Wang (2014) also argued that, the practices of corporate governance mechanisms can be differentiated by the type of control, degree of ownership, and the identity of the controlling shareholders. The influence of corporate governance on firm performance has been well researched, but the influence of corporate governance mechanisms and firm characteristics on firm capital structure is little known. Apart from the fact that there is a dearth of research related to the issue of corporate governance and capital structure in Nigerian firms, most of the available studies also provided contradictory findings.

Shehu (2011) concluded that, like other developing economies, the area of research for capital structure is still unexplored in Nigeria. Therefore, the need for an investigation of the relationship between the corporate governance mechanisms and capital structure levels of the listed firms in Nigeria has become an essential action. According to Ogebe, Ogebe, and Alewi (2013), the difficulty facing firms in Nigeria has to do more with the financing choice, whether to opt for debt financing or equity financing, and the issue has been established as an immediate cause for a business failing and/or progressing. It is evidently clear that both internal corporate governance mechanisms and firm characteristics (such as, firm size, firm growth, and firm age) alongside with the macroeconomic factor influence the capital structure levels (Muthama, et al., 2013). Thus, the central point of this study is to assess the level of their relationships and influences on the capital structure of the listed firms in Nigeria.

Agency problems arise as a result of the relationships between shareholders and managers and are based on conflicts of interest within the firms. This problem calls for effective

corporate governance strategy in Nigeria for sustainable development. Only with efficient corporate governance mechanisms, can firms have effective management of the capital structure, which will help the firm to gain competitive advantage and increase the profitability of the firm (Velnampy & Aloy, 2012). In spite of numerous studies on corporate governance, the agency problem still exists in Nigerian firms to date. This has affected the firms' financing decisions thereby reducing their performances (Ahmadpour Jafari & Golmohammadi 2012).

The capital structure decision of a firm has been proven to be associated with the firm's corporate governance practices. For example, the board and ownership structures of the firm have been found to have an influence on the firm's capital structure decisions (Lawal, 2012). In addition, Vakilifard, Gerayli, Yanesari, and Ma'atoofi (2011) argued that more non-executive directors in a firm will help to reduce the amount of debt for the provision of finance due to the presence of more effective supervision and control.

However, a lack of effective control of corporate firms as a result of the weak corporate governance practices in Nigeria has led to the detriment of shareholders and created a class of stakeholders who have lost interest in the system thereby causing the collapse of many firms in Nigeria (Quadri 2010). The reasons for this have been that firms could not get better access to the financing choice, have been faced with a higher cost of capital, and there has been no better consideration for all the firm's stakeholders and better firm performance. Quadri (2010) argued further that, the collapse of the firms will lead to the loss of existing shareholders' rights and the loss of new investors' confidence in the

country's firms. Therefore, financial choices affecting the firm's capital structure are very prominent amongst the firms' financial decisions based on the needs to increase the stakeholders' investment returns and the ability of the firms to deal with a competitive environment.

According to Amos and Jeremiah (2013), Nigeria's capital market has been characterised with an inactive debt market, shallow market nature, the buy and hold syndrome of Nigerian shareholders, and also the unconducive social-political environment. Thus, Nigerian firms rely heavily on the money market rather than the capital market for their operation requirements, making the money market dominant in the Nigerian financial market system. This has put a question on the relationship between micro and macro policy issues on the firms' capital structure decisions.

Yisau (2016) noted that, firms in developing economies like Nigeria are operating in a business environment that has been characterised with poor institutional quality, and imbalanced macroeconomics that have led to capital market inefficiency, very high transaction cost, moral hazards, agency-related problems, and poor corporate governance. As a result of which, there has been growing anticipation of bankruptcy, financial distress, and restructuring amongst Nigerian listed firms (Nduka & Ucheahara, 2016).

According to Echekoba and Ananwude (2016), due to the cost associated with the operations in most of the sectors in the Nigerian listed firms (e.g., oil and gas, construction, and industrial sectors), many commercial banks are not willing to lend long-term loans to

firms in those sectors as a means of enhancing their liquidity position. Thus, many firms are dependent on retained earnings which is the least expensive means of financing. However, in Nigeria most of the big firms, particularly indigenous firms are not buoyant enough to finance major investments from retained earnings or equity capital (Echekoba & Ananwude, 2016).

The possible bank loans that may be available, are short-term loans (over-draft), however, the interest rates that banks charge on this overdraft are high. In addition, the few banks that provide long-term loans to larger firms in Nigeria give them at higher lending rates as a result of the national currency devaluation by the Central Bank of Nigeria (CBN) starting from 2014. Consequently, most of the firms in the country which are dependent on bank credit are now having difficulty in obtaining new loans whilst many have resorted to other forms of short-term debt, and some resort to loan restructuring. This loan restructuring can also post a signal to capital structure restructuring on the appropriate financial choice. Abor (2005) argued that different capital structure strategies have different influences on the sustainability and profitability of the firm. Thus, a lack of proper empirical examination by the firm managers of the capital structure strategies that the firm opts for would have an adverse effect on the firm's performance and growth.

An extensive review of the literature has revealed that the empirical works (Beger & Dipatti, 2003; Chaganti & Damanpour, 1991; & Hassan 2009) mostly focused on the impact of corporate governance on the firm's performance or examine the influence of ownership structure on firm value. However, the relationship between corporate

governance mechanisms and capital structure decisions has not been extensively explored in the Nigerian context.

Only a few studies, such as Brailsford, Oliver, and Pua (2002); Hussainey and Aljifri, (2012); Wen, et al. (2002); and Al-Najjar and Taylor (2008), investigated the relationship between board structure, ownership structure, and capital structure. Some studies (Wen, et al. 2002; Abor, 2007; Nadeem & Sheikh, 2012; and Hussainey & Aljifri, 2012) discussed the influence of corporate governance on capital structure decisions of firms for developed and emerging markets. Otnet (2006) stated that corporate governance is an important issue nowadays due to the different financial crises in Asia, Europe, and America.

Empirical studies have shown that corporate governance mechanisms have an impact on the capital structure, but the direction of the relationship is mixed. Whilst some studies concluded that there is a positive significant relationship between corporate governance and capital structure (Rehman, Rehman, & Raoof, 2010; Saad, 2010; and Berger, & Diatti, 2003), others concluded that there is a negative significant relationship (Abor, & Biekpe, 2007; Hussaini & Aljifri, 2012 and Wen, et al. 2002). The studies have provided mixed results; whereas, the influence of corporate governance policies on the firm's financial mix is of great concern to the firm's management. This study intends to fill a gap in the literature by illuminating the significant relationship between the corporate governance mechanisms, firm characteristics, and capital structure of the listed firms in Nigeria. This research work has tried to answer the followings research questions.

1.3 Research Questions

The research questions of this study were:

1. Does a significant relationship exist between board structures (board size, board meetings, and board independence) and the capital structure of the listed firms in Nigeria?
2. Does a significant relationship exist between ownership structures (block holder ownership, managerial ownership, and institutional ownership) and the capital structure of the listed firms in Nigeria?
3. Does a significant relationship exist between the firms' specific characteristics (firm size, firm age, and firm growth) and the capital structure of the listed firms in Nigeria?
4. Does a significant relationship exist between external auditor choice (Big 4 audit firms) and the capital structure of the listed firms in Nigeria?

1.4 Research Objectives

The objectives of this study were:

1. To examine the significant relationship between board structures (board size, board meetings, and board independence) and the capital structure of the listed firms in Nigeria.
2. To examine the significant relationship between ownership structures (block holder ownership, managerial ownership, and institutional ownership) and the capital structure of the listed firms in Nigeria.

3. To examine the significant relationship between the firms' specific characteristics (firm size, firm age, and firm growth) and the capital structure of the listed firms in Nigeria.
4. To examine the significant relationship between external auditor choice (Big 4 audit firms) and the capital structure of the listed firms in Nigeria.

1.5 Scope of the Study

This study has examined the influence of the corporate governance mechanisms and firms' specific characteristics on the capital structure decisions of 106 non-financial listed firms in Nigeria for a period of five (5) years from 2012 - 2016. This was due to the fact that in 2011 a reviewed code of corporate governance for public companies was issued by the SEC. It has been effective from November 2011. For the purpose of this study, the dependent variable was the debt to total assets ratio (which was the capital structure) whilst the independent variables were the corporate governance mechanisms (board size, board meetings, board independence, block holder ownership, managerial ownership, institutional ownership, and external auditor) and firms' specific characteristics (firm size, firm age, and firm growth). The control variables were the macroeconomic variables (GDP Growth Rate, Bank Lending Rate, and Inflation Rate).

1.6 Significance of the Research

The purpose of the study was to examine the influence of the corporate governance mechanisms and firm characteristics on the capital structure decisions of the non-financial listed firms in Nigeria. The study will be of importance in the following ways:

Theoretical Significance

This research work has examined the influence of the corporate governance mechanisms and firm characteristics on the capital structure of the listed firms in Nigeria. The agency theory establishes the influence of the monitoring mechanisms to reduce principal-agent conflicts and agency cost. The corporate governance literature identifies the internal and external monitoring mechanisms that can influence the firms' capital structures. Hence, this study has examined the influence of the board and the ownership structure's monitoring mechanisms on the firms' capital structures. Capital structure and the corporate finance theory also establish the influence of firm characteristics that can influence the firms' financial choices. This study, therefore, has sought to integrate board structure, ownership structure, and firm characteristics with firm capital structure in an attempt to extend the literature in the field of corporate governance and corporate finance.

Empirical studies conducted in the past have led to the development of the, theories about the determination, influence and composition of the optimal capital structure. Some of these theories will be briefly reviewed in this study due to their relationship with corporate governance, firm characteristics, and capital structure. They are the trade-off theory, pecking order theory, and agency theory. Bokpin (2009) argued that some of these theories are specifically focused on the relationship between the firms' characteristics and the firms' financial structures, and they are also based on the assumptions of the macroeconomic variables' stability. However, based on the empirical studies and theoretical framework conducted in the recent times, it has been proved that a relationship does exist between corporate governance mechanisms and the firms' financial structures (Brailsford, et al.

2002; Hussain & Aljifri, 2012; and Wen, et al., 2002). To this end, the agency theory is also relevant when describing the relationship between corporate governance and capital structure.

Tests of the agency cost theory on the relationship between corporate governance mechanisms and capital structure enrich the literature on capital structure and agency cost issues. This research provides insights into the factors that are decisive in predicting firms' capital structure from a combination of corporate governance mechanisms that affect a firm's efficiency and the effectiveness of its resource utilisation.

This research work has examined the relationship between the control and monitoring roles of the board and ownership structure on the capital structure. Also, the influence of firm characteristics on firm capital structure has been examined, and in line with the corporate governance framework, this study has integrated the agency theory and capital structure theories. The agency theory establishes the important role of the monitoring mechanisms to reduce the conflict between the principal and the agent, and also to reduce agency cost. Literature on corporate governance identifies many monitoring mechanisms, including the role of board size and its composition. Hence, this research work included board meetings with board size and board independence as board monitoring and control mechanisms that can influence capital structure, in an attempt to extend the agency theory's monitoring mechanisms and literature in this field. To the author's best knowledge, very few studies examine the relationship between board meetings and capital structure as a corporate governance monitoring mechanism.

Practical Significance

The results of this study will also be of benefit to present and potential investors and the top managers of firms in Nigeria by showing the impact of the board, ownership, and firm characteristics on the capital structure decisions of their firms. The findings may help various stakeholders to identify the influence of corporate governance policies on the firms' capital structure decisions so as to be more focused and efficient as a monitoring tool. By applying the study's recommendations, the board of directors of the listed firms in Nigeria may institute better strategies to monitor the top management of their firms and, thereby, lower the company's agency costs, reduce investment risk, and enhance corporate value.

By showing the long-term benefits of a sound corporate governance structure on the firm's financial decisions, the findings of the study may persuade both the board and top management to focus on merit and competency whilst recruiting top managers on factors that align the shareholders' interests with those of the agents. In addition, by highlighting the positive outcomes of compliance with the corporate governance mechanisms policy, the board of directors and managers may be persuaded of the importance of effective corporate governance practices, the implementation of which would send a positive message to the market and improve firm value.

Although this study has specific relevance to the needs of Nigerian firms, it is believed that firms in many other developing countries, especially West African countries, which share

similar social, political, and economic environments. The results of this study may be beneficial and applicable to these countries as well.

Finally, the results of this study may be of interest to policy-makers and regulators as the influence of the monitoring policy on the firms' financial choices has been identified, and it has been seen that there is a need to ensure that there is a real commitment for all the listed Nigerian firms to implement effective corporate governance mechanisms through improving the regulatory and enforcement corporate governance framework. This research work has examined the potential impact of the internal corporate governance mechanisms (Board of directors and ownership structure), external auditor choice, and firm characteristics on Nigerian firms' capital structure levels. Exploring the association between corporate governance and capital structure is extremely important, especially after the implementation of the corporate governance code 2011, which was contended to enhance the efficiency of Nigeria's stock market.

The role of corporate governance practices on capital structure should be assessed periodically, especially when there has been an enactment of new rules and regulations, which has brought about new situations that businesses and investors have had to face. Limited information is available due to a dearth of prior studies examining these issues in Nigeria. Hence, it is imperative to conduct an in-depth study to assess the current status of corporate governance practices in order to identify a corporate governance policy that will bring about the active growth of the firm and also help it to grasp better opportunities in attracting funds from lenders and investors. A corporate governance policy that will enable

the firms' management to determine the mix of debt and equity that will maximise the shareholders' wealth and the sustainability of the firms is necessary. The findings will add value to the existing literature on corporate governance and capital structure, and serve as a reference for further research.

1.7 Summary

The capital structure decision is one of the most fundamental issues in a firm's strategic decisions, and according to most of the theories of capital structure, such decisions can be affected by various factors amongst which corporate governance mechanisms and firm characteristics are more pronounced. Corporate governance mechanisms can greatly assist firms by infusing better management practices, effective control and accounting systems, stringent monitoring, effective regulation mechanisms, and utilisation of firms' resources efficiently which will eventually result in the improvement of the firms' performances.

This chapter started with the background and motivation of the study where the basic foundation of this study was laid. This was followed by the research problem statement, where the relevant issues', both empirical and theoretical, justifications were discussed. The research problem statement was followed by the research questions, research objectives, and the scope of the study. Consequently, the significance of the study was also discussed in the chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 General review of Nigeria's Economy

Nigeria is a developing country, a member of the Organization of Petroleum Exporting Countries (OPEC) and one of the largest economies in Africa by Gross Domestic Product (GDP). With a population of about 170 million inhabitants, Nigeria has the largest population in Africa and the largest in the black nation. It has recently been acknowledged as being Africa's largest economy and the 26th leading economy in the world with a GDP of $510 billion in 2013 (Collier, 2014). Also, based on the GDP, it was ranked the 20th largest economy in the world in 2015. The Purchasing Power Parity (PPP) and nominal GDP of Nigeria are worth more than $1 trillion and $500 billion respectively.

2.2 Nigeria's Macroeconomic indicator

According to the World Bank's definition, the Gross Domestic Product is the total of the gross value added by all resident producers in the economy and any product taxes and minus any subsidies not included in the value of the product. The economic growth of countries is calculated as the percentage change in the GDP from one year to the next. It measures whether production has increased, and by how much. The magnitude and structure of the growth in Nigeria's economy for 2012, 2013, 2014, 2015, and 2016 were assessed at 4.2%, 5.5%, 6.2%, 2.8% and -1.6% respectively. See Table 2.1.

Table 2.1
Nigeria Macroeconomic indicator

	2012	**2013**	**2014**	**2015**	**2016**
Population (million)	165	169	174	179	184
Exchange Rate vs USD (Naira)	156.2	160.0	183.0	199.1	304.7
Economic Growth (GDP annual variation in %)	4.2	5.5	6.2	2.8	-1.6
Inflation Rate (CPI annual variation in %)	12.2	8.5	8.1	9	15.7
Policy Interest Rate in % (Bank Lending Rate)	12	12	13	11	14

Sources: Focus Economic (www.focus-economics.com/countries/nigeria)

The inflation rate is normally measured by the consumer price index. It reflects the annual proportional changes in the cost to the average consumer acquiring a basket of goods and services that may be fixed or changed at a specific interval, like yearly (World Bank definition). Inflation in Nigeria and other countries is usually calculated as the percentage change in the Consumer Price Index (CPI) from one year to the next. The CPI represents the prices paid by the average urban consumer in every various country. Inflation can also be calculated with other price indexes, such as the Product Price Index (CPI) or the so-called GDP deflator. Inflation in Nigeria has continued its downward trend in line with a tighter macroeconomic policy since 2011. The rate of CPI inflation remained highest in 2012 (12.2%) due largely to non-monetary factors, including increases in administrative prices, a national strike, and several flooding events in some regions. The CPI inflation fell to 8.1% in 2014 and later rose to 9% in 2015.

The Bank lending rate is the bank interest rate that usually meets the short-and medium-term financing needs of the private sectors. Normally, the bank lending rate varies according to the creditworthiness of the borrower and the objectives of the financing. The terms and conditions attached also differ by countries. The figure on Table 2.1 shows the bank lending rates on credits from banks to prime borrowers, i.e., to the lowest risk borrowers in the private sectors.

2.2.1 Gross Domestic Product (GDP) Growth Rate

One of the important variables normally used as a proxy for macroeconomics by many researchers in accounting and finance empirical studies is the Gross Domestic Product (GDP) growth rate. This GDP growth rate of the country is very important for the effectiveness and appropriate decisions of a firm's strategic policies and financial decisions (Riaz, Bhatti, & Shahab-ud-din, 2014).

The conclusion drawn from the empirical studies was that a country's economic growth influences the firms' capital structure decisions. As the economy grows, a reduction is observed in the expected bankruptcy cost, collateral values of the assets will rise, stock prices and free cash flow will also increase, these will affect the firm's growth and its financial choice (Lemma and Negash, 2013). Therefore, when there is an improvement in a country's economic situation, the firms have more potential to have easily available external financing so as to satisfy their extra financing choice. These are the basis of the Market Timing Theory. The economic growth rate is anticipated to be related to equity

financing positively and negatively with leverages as well as retained earnings (Korajczyk, Lucas, & McDonald 1992; Choe, Masulis, & Nanda, 1993).

There are many indicators that could represent a country's economic growth. However, the GDP's growth rate could be a measuring tool of the country's economic activities. Authors like Booth, et al. (2001); Lemma and Negash (2013), etc., have supported the use of the GDP for investigating the relationship and the effect of economic growth and decisions on a firm's capital structure. Bokpin (2009) studied the relationship between macroeconomic variables and capital structure, and its influence on the firms' financial choices in 34 emerging economic countries for a period of 17 years (1990-2006).

The result of the study indicated that GDP relates with debt-to-equity ratio negatively and significantly, inflation rate relates to the short-term debt over equity financing positively, the development in the stock exchange market is insignificantly related with the capital structure of firms and, at the same time, the expectation of skyrocketing rates of bank lending can influence the firm to opt for short-term debt over long-term debt and equity financing. Riaz, et al. (2014) also used an economic factor model so as to scrutinise the impact of macroeconomic elements on the firm's resolution on capital structure in Pakistani firms; the result indicated that the gross domestic product's growth rate has an inverse effect on the debt to equity ratio remarkably.

2.2.2 Bank lending Rate or Interest Rate

Another important economic factor that influences the capital structure decisions of firms is the bank lending rate, otherwise known as interest rate. According to Bokpin (2009), the interest rate influences the firm's capital structure positively and significantly (Bokpin 2009), but in contrast, Dincergok and Yalciner (2011) argued that the interest rate and capital structure are not positively related, and that interest rates primarily affect the firm's capital structure by affecting the debt financing cost, which is the rate of interest lenders charge on the borrowed funds.

The common varieties of debt financing available to firms in Nigeria include bank loans, debenture, and bonds. Interest on loans was comparatively associated with a protracted fastened legislation. Therefore, once the bank lending rate is higher, firms normally do not raise extra funds through bank loans. This is because of the fear of bankruptcy, hence, firms think about the bank lending rate before deciding on debt financing.

Antoniou, Guney, and Paudyal (2002) argued that the interest rate is inversely associated with leverages. Also, Lemma and Negash (2013) declared there was a negative relationship, but further argued that if creditor protection rights were stronger, and there was a superior quality of law enforcement, it might discourage firms from borrowing funds. This is because firms may need to scale back the risks that involve debt. Chen (2010) postulated that firms' issue debt when interest rates are lower, thus they behave like a 'market timer'. It has been shown, empirically, that interest rates negatively influence debt ratio (Axelson, Jenknson, Stromberg, & Weisbach, 2013; Barry, Mann, Mihov, &

Rodriguez, 2008). This can be explained by the surveyed behaviours of managers who tend to be involved with the issuance of debt for the period when interest rates are at historical lows and debt is cheaper (Graham & Harvey 2001). The effect of interest rates on capital structure is expected to be related to the changes in inflation because changes in inflation determine interest rates (Booth, et al, 2001).

In accordance with the Market Timing Theory, firms' managers are constantly watching the movement of stock markets and only issue securities when the market condition is favourable. Thus, by timing favourable markets, the managers can enhance the operational performance of the firms. Although there is a cross-industrial dissimilarity in the firms' capital structure decisions, depending upon the country and the sector to which the firms belong to, the firm managers must be able to establish the windows of opportunity during which the security issuance is less costly. This would contribute towards the enhancement of the present operational performance and also towards the future progress of the firms.

2.2.3 Inflation Rate or Consumer Price Index (CPI)

The inflation rate in the country is another important economic factor that affects the resolution of firms on its capital structure. With the persistent increase in the price level of different goods and services in the country, the general increase in the cost of a firm's raw materials and other infrastructural amenities, like power and transportation, etc., also increase as well as the capital requirement of the firms.

Going by the market timing assumption of the capital structure, the firms will use more of their leverage when it appears that the rate of interest on the debt is lower than the past rate and the future expectation rate. But generally, the prediction about the future interest rate depends upon the inflation trend in the economy. Therefore, when there is speculation that the inflation rate may rise in the future or that the inflation rate is currently low, firms opt for debt financing (Frank and Goyal, 2009). This is in agreement with the market timing assumption that postulates that the relationship between the inflation rate and debt ratio correlates with the expectation of a future increase in the inflation rate. Dammon and Senbet (1988) observed that a higher inflation rate forces investors to sell their bonds in exchange for stocks and, therefore, the firms' debt to equity ratios tend to decrease. The general case replica developed by Gulati (1997) to explore the impact of the inflation rate on capital structure decisions gives an indication that the inflation rate affects leverage, considerably. The empirical study of Booth, et al. (2001) argued that higher inflation rates end up reducing both the total debt ratio and long-term debt ratio in developing countries.

Muntenheri and Green (2002) measured the inflation rate as the proportional changes in the consumer price index (CPI). They conducted their study on 52 listed firms in Zimbabwe throughout the period of 1990 to1999. The outcome of the study indicated that the inflation rate has no appreciable impact on the designing of the capital structure of firms in Zimbabwe. In contrast, Riaz, et al. (2014) argued that the inflation rate represents a country's economic growth and is an important economic indicator which is significant and positively related to the debt ratio.

Nigeria's economy overtook the South Africa economy in 2014 to become the biggest economy in Africa. According to the World Bank Report, Nigeria is classified as an emerging market with a mixed economy model, a nation with lower middle-income status, a supplier of natural resources in abundance, well-developed communication, transportation sectors, and legal, financial and stock exchange markets (The Nigeria Stock Exchange).

2.3 The Nigerian Stock Exchange Market

The stock exchange market in Nigeria, known as The Nigerian Stock Market, was established in 1960. It was initially called The Lagos Stock Exchange, and the Stock Exchange Council was inaugurated on the 15th of September, 1960. The Lagos Stock Exchange began informal operation in June 1961, but it began operations officially on the 25th of August, 1961 with 19 securities listed for trading. During that time, the initial operation of the Lagos Stock Exchange Market was conducted inside the Central Bank (CBN) building in Tinubu Square Lagos, with only four (4) firms as market dealers. They were: C.T. Bowring, John Holt, ICON (Investment Company of Nigeria), and Inlaks. The volume traded by August 1961, was about eighty thousand five hundred pounds (£80,500). It later rose to about two hundred fifty thousand pounds (£250,000) in September 1961 with the majority of the investments in government securities.

The name was changed to The Nigerian Stock Exchange (NSE) in December 1977 by the Indigenisation Decree of 1977. Its trading floors were in Kaduna, Port-Harcourt, Kano Onitsha, and Yola. As of June 28th, 2016, the number of listed firms in the Nigerian Stock

Exchange rose to about 180 firms and with a total capitalisation close to Ten trillion and sixteen billion Naira (₦10.16tr).

On December 31st, 2015, 172 equities were listed on the NSE, with a total capitalisation of $85.3 billion. There were also 15 federal government bonds, 21 corporate bonds, 22 state and municipal bonds, 7 exchange-traded products, and two supranational bonds. The firms listed on the NSE were in 12 industrial sectors, including agriculture and agro-allied, conglomerates, construction, real estate, consumer goods, financial services, healthcare, information technology, industrial goods, natural resources, oil and gas, and utilities. This research was conducted on all the non-financial firms.

The majority of businesses in Nigeria are not publicly listed, and in terms of numbers, the greater percentage is not even registered for many reasons. Some of the reasons are: lack of proper education, avoidance of the tax net, and the insignificant nature of the business carried out by these business people. Oyejide and Soyibo (2001) estimated that 13.3% of the businesses in the country are not publicly listed, and of the registered companies, only 38% operate in the formal sector. More than 87% of Nigerian businesses carry out their operations outside the rules governing the stock market and fail to comply with the corporate governance codes and the IFRS (Oyejide & Soyibo, 2001). They concluded that the compliance with corporate governance codes, like the laws that govern most activities in the country, is poor.

2.4 Concept of Corporate Governance

There is no single definition of corporate governance and certainly no definition that all nations agree on (Mayes, Halme, & Liuksila, 2001). Thus, corporate governance can be defined and practised in different principles, globally, depending upon the relative power of the owners, managers, and providers of capital (Craig, 2005). However, corporate governance can be generally described as a procedure, customs, laws, policies, and institutions that affect the way a firm is directed, administered or controlled. It can also be viewed as the relationships between stakeholders and the goals that are already laid down for the firm to follow. The principal stakeholders are shareholders, management, and the board of directors. In addition, employees, customers, creditors (banks and bond-holders) are also stakeholders. The important objective of corporate governance is to ensure the accountability and transparency of those involved in the policy of the firm through mechanisms that will reduce the incidence of principal-agent problems.

In terms of corporate governance mechanisms and structure, Keasey and Wright (1993) defined corporate governance as a framework for effective monitoring, regulation, and control of firms which allows alternative internal and external mechanisms for achieving the laid down objectives. The internal mechanisms are the board characteristics, managerial ownership, and non-managerial shareholding which involve institutional shareholding and blocked shareholding. Meanwhile, the external mechanisms are statutory audit, the market for corporate control effectiveness in hostile takeovers, and stock market evaluation of corporate performance (Keasey & Wright, 1993).

However, the advantages of the entire corporate governance framework are determined by the interaction amongst these governance mechanisms. Using the Agency Theory approach, Shleifer and Vishny (1997) defined corporate governance as a process in which a supplier of finance to firms assure themselves of getting a return on their investment. The authors posited that corporate governance is mainly concerned with the principal-agency problem between ownership and control. The authors emphasised that corporate governance should be seen as a set of mechanisms through which outside investors protect themselves against insiders.

Cadbury (2002), also, defined corporate governance as the system by which firms are directed and controlled by shareholders. In addition, in terms of the attainment of firm goals, objectives, and performance, OECD (1999) viewed corporate governance as a set of relationships between the firm's management, its board, shareholders, and stakeholders. It also provides the structure through which the objectives of the firm are set and the means of attaining those objectives and monitoring performances are carried out.

2.5 Enforcement of the Corporate Governance Codes in Nigeria

According to Ejavbekpokpo and Esuike (2013) and Miko and Kamardin (2016), corporate governance in Nigeria is an entirely new concept. Although the Companies and Allied Matters Act 2004 (CAMA), Banks and Other Financial Institutions Act of 2002 (BOFIA, 2002), as amended, Investments and Securities Act of 1999 (ISA, 1999), and the Securities and Exchange Commission Act of 1988 (SEC, 1988) included many provisions concerning corporate governance practices, the laws are merely in the books, but not in action.

Enforcement is poor in the country where matters are more often than not settled through quasi-legal means (Ejavbekpokpo & Esuike, 2013). Many investors are only interested in receiving yearly dividends, and because most of them are widely dispersed and of little education, the directors are in total control of the affairs of the business, and the annual general meetings are usually manipulated in their favour (Toyin, 2017).

The enforcement of compliance with corporate governance codes does not rest with one institution in Nigeria. The Central Bank of Nigeria (CBN) supervises the financial institutions and ensures compliance. If a bank is quoted on the NSE, the exchange also assumes some jurisdiction. Lately, the Inland Federal Revenue Services (IFRS) came on board after Nigeria joined other nations in implementing the IFRS. The Financial Reporting Council is now claiming to be the preeminent enforcer of these codes. There is a lot of confusion regarding which institution the listed firms should be answerable to.

The need to develop and promote good corporate governance in Nigeria has led to the Securities and Exchange Commission setting up the Atedo Peterside committee in 2003 whose report yielded the first comprehensive code of best practices for the public firms in Nigeria. This was an attempt to regain the confidence of the public. It explained the role of the Board of Directors and management, shareholders' rights and privileges, and the audit committee (Okpara, 2010).

The CAMA 2004 and other company laws provide very limited protection to shareholders and other stakeholders against poor corporate governance. The Securities and Exchange

Commission (SEC), in order to fill this lacuna, inaugurated a national committee in September 2008 for the review of the 2003 Code of Corporate Governance for Public Companies in Nigeria (C.C.G.C.N). This was to tackle its shortcomings and develop the system for its implementation. The committee headed by Mahmoud Abubakar Balarabe, SAN (Senior Advocate of Nigeria) was saddled with the following responsibilities:

i. To identify the weaknesses in the current corporate practices in Nigeria with respect to public companies.
ii. To examine practices in other jurisdictions with a view to adopting the international best practices in the corporate governance in Nigeria.
iii. To examine and recommend ways of effecting greater compliance.
iv. To identify and advise on other issues that are relevant to promoting good corporate governance practices by public companies in Nigeria.

The committee highlighted the shortcomings in the Nigerian corporate governance practices as regards public companies after benchmarking with the practices in other jurisdictions. Upon submission of its report together with a draft revised Code of Corporate Governance, the Securities and Exchange Commission reviewed the draft code, introduced some amendments and created the Corporate Governance Code for Public Companies in April 2011. The Corporate Governance Code 2011 focused on board responsibilities and composition, CEO duality, procedures and frequency of meetings, requirements for non-executive directors, compensation of the members of the board, and financial reporting and control (Afolabi, 2015; Ejuvbekpokpo & Esuike, 2013).

The Corporate Governance Code 2011 issued by the SEC, was fashioned after the OECD principles of corporate governance, and also stipulated the rights and responsibilities of shareholders; audit committees' duties and responsibilities, qualifications, and meetings; and the size, diversity, experience, and independence of the board of directors.

Afolabi (2015) stated that the reason why corporate governance is ineffective in Nigeria could be traced to a wholesale adoption of the British company's law of 1948 by the Nigerian legislatures. According to him, the adoption was done without considering the peculiar history and business environment in Nigeria, the country's level and stage of development. The failure of Nigeria's businesses is traceable to other factors than just corporate governance weaknesses, though a poor control system is a significant contributor to corporate collapses in the country.

2.6 Concept of Capital Structure

Several definitions of the capital structure were given by different scholars and researchers. Amongst those definitions is the one given by Haugen and Senbet (1988), who defined the capital structure as a choice of firm between internal and external sources of financing. Schlosser (1989) also defined the capital structure as the ratio of total debt to the total capital of a firm. Another definition is from Brealey and Myers (1991), they defined the capital structure as a composition of the total debt, total equity or hybrid securities issued in the firm's capital.

Bos and Fetherson (1993) described capital structure as the ratio of total debt to the total asset at book value that influences both riskiness and profitability of the firm. Pandey (2004) concluded that, the firm capital structure is the ratio of the total debt and total equity financing of the firms. From the definitions above, it can be concluded that the firm's capital structure is the ratio of total debt to total asset that a firm uses to finance its operations. Some scholars also referred to it as firms' leverage.

The use of fixed-charge sources of funds alongside equity in the capital structure is termed as financial leverage (Pandey, 2004). It could also be referred to as the leverage of a firm or the proportional relationship or ratios between the company's debt and equity. A firm that has a capital structure with a lot of debt is referred to as a highly leveraged firm, whilst those without debt financing are called unleveraged firms. Myers (2001) proved that, the study of capital structure basically attempts to describe the mixture of stock and other sources of finance that the firm uses in its operations. Thus, studies on capital structure normally focus on the ratio of debt to equity which is disclosed in the yearly financial statement of the firms.

Equity capital refers to funds generated or raised from investors, generally shareholders, by the process of the sale of shares/stocks, and one of the advantages of using equity financing is that, there is no need to repay the funds, as the understanding of the shareholders when they purchase stock is that they own a little stake within the business, then it is the obligation of the firm to generate consistent profits so as to keep up a healthy stock valuation and pay dividends.

Debt capital refers to funds acquired through borrowing and later to be repaid. There are various types of debt, but the most common types of debt capital include debentures and bonds, preference shares, and bank loans. Amongst the benefits of debt capital is that it allows the firm to leverage little funds to a bigger one which enables speedy development that might otherwise be impossible. Another advantage of debt capital is that interest payment rates are typically tax-free, meaning that even if the interest rate increases, the cost will be partially offset by the reduction in taxable operational income of the firm. However, the disadvantage of debt capital financing is that the lender needs the payment of interest, meaning that the overall quantity to be repaid will exceed the initial amount. Also, regardless of the firm's revenue, the payment on the debt obligation must be made; these may be too risky especially for newer or smaller firms.

According to Brigham and Daves (2004), all firms need operating capital to perform their business. Hence, to acquire that operating capital, they usually have to increase the funds by the combination of debt and equity. Accordingly, the trick for each investment is to find the best mix of both. If a company has too much debt, it may overextend its ability to service the debt and can be vulnerable to business downturns and changes in interest rates, and thus, would be viewed to be financially risky. On the other hand, too much equity dilutes ownership interest, exposes the firm to outside control, and usually indicates that the business is not effectively using its cash to obtain business assets. This may be discouraging to investors because it means fewer profits being distributed to them.

Firms establish target capital structures that are considered optimal for business. Though actual levels of debt and equity may fluctuate over time, firms usually attempt to keep their financing mix close to their target. Daves, et al. (2004) were of the opinion that managers should choose the capital structure that maximises the shareholders' wealth. The fundamental approach is to consider a trial capital structure, based on the market values of debt and equity, then estimate the value of the shareholders under this capital structure.

2.7. Underpinning Theory: Agency Theory

Corporate governance has traditionally been associated with the "principal-agent" or "agency" paradox. A "principal-agent" relationship arises when the person who owns a firm is not the same as the person who manages or controls it. The agency debate traces its roots from the publication of Berle and Means (1932) in which they noted that the separation of ownership and control gives managers the opportunity to pursue their interests the against owners' interests. It was later developed by Jensen and Meckling in their 1976 publication. Jensen and Meckling (1976) established that the consequence of the separation of ownership and control is the agency problem as the managers may not act in the interests of their principal, accordingly, because the interests of both parties may not be aligned. Jensen and Meckling in their publication described an agency as a contract under which one or more persons, called principals, and employs another person (agent) to perform some duties on their behalf which involves deputation of some higher operational right to the agent. They further emphasised that, provided both parties to the relationship are utility maximisers, there is good evidence to assume that the agent will not always act in the interest of the principal.

The results of this agency problem is an agency cost, which is the cost of this separation (ownership and control).

According to Jensen and Meckling (1976), Agency cost is the aggregate of the monitoring costs by the owner, the residual loss also by the owner and the bonding cost by the manager. Monitoring costs refer to those expenses paid to observe, control, and also measure the agent's activities which are normally paid for by the owner. However, Fama and Jensen (1983) argued that those expenses will be ultimately borne by the manager as their compensation will be, eventually, adjusted to cover those expenses. The agent is likely to established structures that will see them acting in the best interest of the owner, the costs of setting up such structures and adhering to them are what Jensen and Meckling (1976) refer to as bonding costs, which are borne by the agent. Moreover, monitoring and bonding costs are not likely to fully align the interests of the owners and the agent; there is still the possibility of having agency losses arising from these conflicts of interest which are referred to as residual losses. The result of this is to enforce a contractual mechanisms designed to mitigate this agency problem.

To mitigate the agency problems, various methods have been suggested. Jensen and Meckling (1976) suggested either to increase the ownership of the managers in the firm in order to align the interests of the managers with that of the owners. Or increase the use of debt, which might motivate the managers to increase their performances to avoid this risk of losing their jobs due to the higher probability of bankruptcy. Jensen (1986) suggested that debt would be used as a controlling device to motivate managers to distribute free cash

amongst the shareholders instead of wasting it on inefficient activities. Grossman and Hart (1982) suggested that the use of debt increases the chances of bankruptcy and job loss which further motivate managers to use the organizational resources efficiently and reduce their consumption.

The consequence that has risen from the corporate governance mechanisms was the role of the monitoring mechanisms that will persuade the managers to perform in order to meet the owners' interests and objectives. The monitoring mechanisms of the agency theory assumption is that the agency problem will be reduced and the manager will be mandated to opt for low debt so as to reduce firm risk and to protect their investments. Various monitoring mechanisms have been suggested by Jensen and Meckling (1976) in reducing the agency problem. Amongst which are monitoring within the firm which relates to board structure, monitoring outside the firm which relates to ownership and the monitoring mechanisms' role in the government regulation and policy. For the purpose of this study, board structure and ownership structure have been used in representing the monitoring mechanisms, whilst choice of external auditor has been used in representing the mechanism related to regulation and policy.

Corporate governance deals with the relationship between stakeholders and the goals that are already laid down, such as the leverages level for the firm to follow. The conflict of interest arising from this relationship is what the agency theory is all about, this substantially serves as the basis for the adoption of the agency theory as the underpinning theory for this research.

2.8 The Theories of Capital Structure

There are other theories that explain the relationship between corporate governance mechanisms, firm characteristics, and capital structure in the literature of accounting and finance. Prominent amongst these theories of capital structure are also considered in this study as supporting theories. The theories are: Modigliani and Miller's Capital Structure Model (1963), Pecking Order, Trade-Off, and Market Timing Theories.

2.8.1 Modigliani and Miller's Capital Structure model (1963)

Modigliani and Miller introduced the Relevancy/Irrelevance model of capital structure in 1958. They formulated the proposition that a firm could not change the value of its outstanding securities by changing the ratio of its capital structure element, and that the value of the firm and its total cost of its capital were irrelevant to its alternative of capital structure.

In 1963, Modigliani and Miller conducted another empirical study and this time introduced taxes into their earlier model. This led to the increase in market value of the firm and reduction in the total cost of capital (Mostafa & Boregowda, 2014). This implied that their earlier model of 1958 was planned under excellent and perfect capital market conditions, thus the value of any firm is independent of its financing decision. However, those assumptions could not hold in the real world, but by the time those assumptions were relaxed, the capital structure decision became an important factor that determines the value of a firm (Sheikh and Wang, 2010). Modigliani and Miller's Relevancy/Irrelevance model of capital structure proposition has faced challenges for being strictly theoretical and none

of those assumptions could hold up in reality (Danso & Adomako, 2014). These challenges led to the development of several capital structure theories by different scholars and researchers.

2.8.2. The Pecking Order Theory of Capital Structure

The pecking order theory is an old theory in the area of capital structure theory development and descriptive literature. The theory was originally developed by Donaldson in 1961 in an attempt to explain the financing behaviour of management. It was, however, articulated clearly by Myers and Majluf (1984) where they proposed three sources of funds: retained earnings, debt, and equity, as the available firm financing sources in order of their priority. The theory advocated that firms should prioritise their financing sources from internal sources to external equity. Thus, the pecking order theory postulated that a firm make its financial choice following the priority sequence from retained earnings (internally generated income) to debt financing, and then equity financing.

The rationale for this prioritisation of the financing sources from retained earnings to debt to equity, was that internal funds were thought to be the cheapest and there is no outsider interference. Picking external debt as the next option is because it is cheaper and it has very few limitations compared to the issuance of new equity financing. This Pecking Order theory, according to Mostafa and Boregowda (2014), is contrary to the Trade-off theory and probably cannot supply the best optimal capital structure.

2.8.3 The Trade-off Theory of Capital Structure

The trade-off is assumed to be the most prominent and oldest theory, the original version came into being after the Modigliani-Miller's proposition in 1963. Kraus and Litzenberger (1973) provided a classical version of the theory that, optimal leverage reflects a trade-off between the tax benefits of debt and bankruptcy costs. Kraus and Litzenberger (1973) stated that in a complete and perfect capital market, the firms' market values are independent of their capital structures. However, they also stated that the taxation of corporate profits and the existence of bankruptcy penalties are market imperfections which stand central in proving the effect of debt on the firms' market values (Kraus & Litzenberger, 1973). According to DeAngelo and Masulis (1980), the theory primarily describes the importance of debt with the existence of bankruptcy costs and taxes. The theory also explains that the firm capital structure is the outcome of the trade-off between the debt benefit and its cost (Abor, 2007). The trade-off theory postulates that firms are expected to select a target capital structure that will maximise the firm value and bankruptcy cost (Sheikh, & Wang, 2010).

It was also argued by Awan and Amin (2014) that the Trade-off theory assumes that each source of finance has its own costs and returns. And all these are related to the firm's earning capability, business operation, and bankruptcy risks. Thus, a firm with a higher tax benefit will opt for higher debt financing, and with that, the bankruptcy costs and benefits from the tax shield are balanced. The Trade-off theory has proved that the optimal capital structure can be achieved by balancing the benefits from the interest repayment on the debt

and the costs of issuing the debt (Jaahanzeb, Rehman, Bajuri, Karami, & Ahmadimousaabad, 2014).

2.8.4 Market Timing Theory of Capital Structure

According to Myers and Majluf (1984), the market timing theory is not a new idea in empirical and academic literature, it is rather a relatively old idea; but, it was renewed and gained popularity recently. Lucas McDonald (1990) designed a model called the Dynamic Adverse Selection model. This model combines those principles of the Pecking Order theory with the Market Timing idea. It has been this model that has clearly articulated the Market Timing theory.

Basically, the Market Timing theory postulates that, before making the selection between debt and equity financing, a manager examines the current condition in the stock market, and prefers whichever option currently looks very favourable, or defers the issuances of equity if neither options look favourable. Firms may even raise funds despite there being no need for it currently, if they have observed that the market conditions seem unusually favourable.

Hovakimian, Opler, and Titman (2001) explained in their research that, the issuance of equity by the managers following an increase in the stock price of the firm is a market timing idea. The Market Timing theory places more emphasis on the prevailing economy condition, though some of those factors traditionally considered in capital structure studies are not reflected in the Market Timing theory. The proponents argued that debt market

conditions, stock returns, or bank lending rates and economy conditions are the main factors that play a vital role in the capital structure decision.

2.9 Empirical Studies on Corporate Governance and Capital Structure

It is generally accepted that corporate governance could play a vital role in the choice of finance that maximises the shareholders' wealth of a firm. Wen, et al. (2002) found a relationship between corporate governance and capital structure by analysing the data of Chinese listed firms. The study revealed that, due to strict rules and regulations, the managers of the Chinese firms did not employ debt to keep the risk of default at a low level. The study also revealed that the managers tended to pursue lower financial leverage when they were facing strong corporate governance from the board. However, their finding only showed a significant value of board composition and CEO's tenure and insignificant results for board size and fixed CEO's compensation.

Suto (2003) described the relationship between corporate governance and capital structure before and after the financial crises, using the Agency Cost approach. The study analysed the time series and cross-sectional data obtained from the KLSE, by using different proxy variables for capital structure and corporate governance. The result showed that the commitment in banks for lending and borrowing caused an increase in the debt ratio. On the other hand, an increase in ownership did not affect corporate management. Further, the study revealed that foreign ownership reduced the agency cost, and also, a high debt ratio attracted excessive investments.

Otnet (2006) conducted a study on the relationship between corporate governance and capital structure in Jordan firms using ownership structure as a proxy for corporate governance. The result indicated that the agency cost rose due to the internal and external set of corporate governance mechanisms and ownership structure, and it could have positive or negative impacts on the capital structure. Anegative relation between ownership structure and capital structure, on one hand, is due to short-term financing. And, a positive relationship between ownership structure and capital structure, on the other hand, is due to sustainability in financing and enforcement of block holders' ownership to avail themselves of the opportunity of a high debt.

Abor & Biekpe (2006) examined the relationship between corporate governance (board size, board composition, board skill, and the CEO duality) and the capital structure of Ghanaian Small and Medium Enterprises using multivariate regression analysis. The results indicated a negative relationship between board size and capital structure decisions. Abor (2007), in his study on how corporate governance affects capital structure, found that there was a significantly negative relationship between board size and capital structure. The study established an opposite result on the association between CEO duality and leverage, where it implied that larger boards adopt low debt policies and the CEO as the board's chairman tended to employ a high proportion of debt. He arrived at this conclusion after analysing data collected from 22 firms listed on the Ghana Stock Exchange (GSE) during asix-year period (1998-2003).

Another study carried out by La Bruslerie and Latrous (2007) revealed that the relationship between ownership structure and leverage varies according to the level of the controlling shareholders' equity ownership. They found that debt in terms of leverage was used by controlling shareholders to protect themselves from unnecessary takeovers. Antoniou, et al. (2008) conducted a study to investigate how firms operating in capital market-oriented economies (the U.K. & the U.S.) and determine their capital structures, using multi-variance analysis. They found that the capital structure of a firm is heavily influenced by the corporate governance practices and exposure to capital markets.

Hussainy and Aljifri (2012) examined the relationship between the corporate governance mechanisms and corporate capital structure. They divided these mechanisms into two types of internal and external mechanisms. The sample consisted of 71 companies, using multiple regressions. The results of this study indicated that institutional investors on the debt to equity ratio had a negative impact. Also, they found that there were positive relationships between the dividend policy and debt to equity ratio. Other findings showed that company size had a positive relationship with the debt to equity ratio.

Rehman, et al. (2010) investigated the relationship between the board size and the capital structure of 19 randomly selected banks in Pakistan from 2005-2006. Panel multiple regressions for analysis was used. They found a positive relationship between board size and capital structure. Saad (2010) used a sample of 126 Malaysian publically listed companies from four industries (consumer products, industrial products, trading/services, and plantations) for the period from 1998 to 2006 using multiple regression analysis. The

results show a positive relationship between board size and capital structure and a negative relationship between duality and capital structure.

Bodaghi and Ahmadpour (2010) collected data from 50 Iranian firms listed on the Tehran Stock Exchange to test the relationship between corporate governance and capital structure. They found a negative relationship between board size and debt to equity ratio. They found that CEO duality did not significantly influence corporate financing behaviour. Guo, Ding, and Sun (2010) investigated the effect of ownership concentration on leverage levels. They used 365 companies from 1997 to 2009. Panel multiple regression was used for the data analysis. Their research findings confirmed a negative effect of ownership concentration on leverage.

In general, Spanos (2005) noted that corporate governance has a vital implication for the economic growth of a nation. This means that to attract more investors into the economy and reduce business risk, there should be an effective and efficient corporate governance practice. There are differences in the economic, social, regulatory, and even business environments in different countries, and from one firm to another. Thus, the corporate governance impact on firms also differs (Rouf, 2011). This is also applicable to capital structure's influence on the firm's value. The capital structure's impact also differs as a result of the dissimilarity in the tax brackets and the companies, rules, and regulations of different countries. The relation between the two phenomena was actually analysed intensively in a developed economy, but such analysis is very scantily available in developing countries like Nigeria.

Corporate governance mechanisms of firms can be seen as principal mechanisms that can influence the firms' capital structures. Hence, the main focus of this section is a review of related literature in terms of some studies that have been conducted to investigate and explain what influence corporate governance mechanisms have on capital structure decisions. Going by the monitoring role played by the board and ownership structure, and the availability of data in the Nigerian firms' annual reports, the corporate governance mechanism variables used in this study include: board size, board meetings, board independence, block-holder ownership, managerial ownership, institutional ownership, and external audit (Big 4 audit firms). Conversely, the capital structure proxy was debt ratio and it was defined as the total debt to total equity plus total debt. However, total equity plus total debt represented the total assets of the firms.

2.9.1 Board Size and Capital Structure

The apex body in a firm that is responsible and accountable for managing the firm and its overall operation is the board of directors. It plays a vital role in strategic decision making concerning the financial mixture. Therefore, the overall affairs of the firm is the board of directors' responsibilities. Designing the firm's strategic aims and objectives and effectively managing the firm's financial and human resources towards attaining those aims and objectives is the function of the board of directors (SEC Code, 2011, 2(1)).

No rule specifies the membership size of firm's board of directors. The membership size depends on the service and the complexity of the firm's activities. Its composition must, however, encourage the diversity and compatibility of the experts and without prejudice to

the freedom and integrity of individual board members to attend the meetings. However, a minimum of five (5) members is required by law (SEC Code, 2011, 4(1) & 4(2)).

The study carried out by Pfeff and Salancik (1978) proved that a significant association exists between board size and capital structure, but the direction of the association is mixed and not clear yet. A study like Abor and Biekpe's (2005) found a negative relationship between the board size and debt ratios in Ghanaian SMEs, adding that larger board SMEs were usually associated with lower debt levels. Also, the influence of the ownership structure and corporate governance in Pakistani listed firms was examined by Hassan and Butt (2009). The result indicated that managerial ownership and board size are both significantly inversely related to the debt to equity ratio. Heng and Azrbaijani (2012) conducted an empirical study in Malaysia on how board size can influence a firm's leverage. They found a negative association between the size of the board and debt to asset ratio.

Recently, Shafana (2016) conducted a study of the board of directors' characteristics and influence on the capital structure decisions of non-financial listed firms in Sri Lanka. The result indicated that all the tested board of directors' characteristics, including board size, did not have any significant relationship with the capital structure decisions.

Contrary to the above findings, some other researchers reported a positive and statistically significant relationship between board size and capital structure decisions. Some of the empirical studies with this result include: Jensen (1986); Wen, et al. (2002); and Anderson,

et al. (2004). The general argument was that larger board firms were more likely to use debt financing than smaller board firms. The same result was also found by Jiraporn, Kim, and Kitsabunnarat (2009) and Hussainey and Al-Nodel (2009). Also, Ganiyu and Abiodun (2012) conducted a study on the influence of board of directors' characteristics in determining the capital structures of food and beverage firms in Nigeria, and they declared that they were related significantly. Another recent study is that of Agyei and Owusu (2014) who conducted research in listed manufacturing firms in Ghana on the association between board size and capital structure decisions. The result shows that they are positively related. However, all the empirical results above depict the importance of board size amongst the corporate governance mechanisms in the capital structure mix practices, and how it influences the capital structure decisions in various firms and countries.

2.9.2 Board Meetings and Capital Structure

The provision of Section 12, Sub-sections 1 and 2 of the SEC Code (2011) mandates the firms' board of directors to arrange and preside over meetings at least on a quarterly basis so as to deliberate on the firms' issues. It says:

> *To effectively perform its oversight function and monitor management performance, the board should meet at least once every quarter, (Minimum of 4 meetings within 12 months).*
> *Every director should be required to attend at least two-thirds of all board meetings (SEC Code, 2011, 12(1 & 2)).*

In these meetings, the directors are expected to discuss every important issue concerning the firm and in addition, the performance of the board members should be assessed also. Limited studies have investigated the relationship between board meetings and capital structure decisions, however, the provision of the code which mandates the board to meet

at least once every quarter indicates the importance of board meetings in corporate governance mechanisms. This has motivated the researcher to include board meetings amongst the board structure variables that influence capital structure decisions.

Empirical research has also analysed the importance of the frequency of the board meetings for effective governance purposes. More frequent meetings would improve the ability of the board of directors to monitor and advise managers (Mudalige & Athula, 2015). Rajendran (2012) found a positive relationship between the number of board meetings and leadership style and the leverage of the firm. Vafeas (2000) also revealed that an increase in board meeting frequency is followed by improvement in the operating performance.

2.9.3 Board Independence and Capital Structure

Board independence signifies that the majority of the members of the firm's board of directors are non-executives. The SEC Code (2011) states that a board be comprised of executive and non-executive directors. This means that for any board to be independent, the majority of the directors must be independent or non-executive directors.

The code emphasises that the board of directors' composition is a vital component of the corporate governance policy. Thus, the capital structure decisions of the firm can be influenced by the proportion of non-executive and independent directors on the firms' boards of directors. The principle of the SEC code 2011, section 4(3) states that "the board ought to comprise a mix of executive and non-executive directors, headed by a chairman,

and the majority of the board members should be non-executive directors, and at least one of whom should be an independent director".

According to Ajanthan (2013), he argued that, to prevent an individual or a group of people from dominating the board's decision making, there should be a balance of executive and non-executive directors in the firm's board of directors. One can also refer to the study of Wen, et al. (2012) and Kajananthan (2012) where they commented that a higher degree of external directors can influence the capital structure decision of the firm. They argued further that, a higher proportion of outside directors has the propensity to monitor managers more actively. The higher the proportion of outside directors, the lower the debt ratio and the higher the level of equity financing; this was the concluding argument of Wen, et al. (2002) from the result of their study. In contrast, Kajanthan (2012) argued that a higher percentage of outside directors utilise higher debt than equity.

Some other studies have also produced mixed results on the direction of the relationship between board independence and capital structure. Jensen (1986); Berger, et al. (1997); and Abor (2007), in their studies, postulated that the higher the proportion of outside directors, the higher the debt ratio and the lower the level of equity financing. Abor and Biekpe (2007) were also in support of this argument. However, it can be concluded that there is a relationship between the board composition and the capital structure decisions of the firms, but the direction and degree of the relationship may differ.

2.9.4 Block Holders Ownership and Capital Structure

Ownership concentration controls the agency cost between the principal and the agent by creating an incentive for and monitoring capacity of the block holder. Heinrich (2002) argued that changing the risk sensitivity of the investors, ownership concentration internalises monitoring and controls the free rider problem. According to La, Porta, and Lopez-de-Silanes (1999), concentrated ownership could be induced by reasons like the substantial legal and financial benefits of control, dominant shareholders' capacity to monitor the managers better, and to counteract the poor legal protection available to small investors. Bolton, Becht, and Roell (2005) opined that partial ownership concentration and firm control by a few large investors solve the collective action problem of the shareholders. As the stake of the shareholders in the firm increases so does the incentive to engage more in the firm's affairs. Consequently, shareholders become more watchfulof management activities and try to protect their cash flow, in the right way.

Salma (2009) studied the impact of ownership concentration and capital structure adjustment. The study was on the capital structure dynamics of a panel of 766 firms from five Western European countries using multiple panel regression analysis. Large block shareholder was used as a measurement of the ownership concentration. The result indicated that transaction costs and the agency costs inherent to ownership concentration are a significant determinant of capital structure dynamics.

Driffield, Mahambare, and Pal (2007) carried out a study on the impact of ownership structure on the capital structure and firm performance of East Asian countries. They

investigated the effect of ownership structure on both capital structure and firm performance. Large block shareholder was used as a measurement of ownership concentration, and on the other hand, they used earnings variability to measure leverage. Their findings failed to produce any conclusive evidence on the relationship between ownership concentration, capital structure, and firm value as the results varied between the firms in the sample countries due to the differences in the legal and corporate governance practices.

Driffield and Mohambare (2007) carried out a study to find the relationship between ownership concentration and capital structure in Indonesia, Malaysia, and Thailand. Their findings confirmed that there is a significantly positive relationship between leverage and ownership concentration. Thus, they proved that the ownership concentration may be an effective supervisory mechanism. They also opined that a higher ownership concentration has a positive impact on capital structure and firm value. In the case of a lower ownership concentration, the relationship depends upon the strictness of the managerial decision making, which is enforced to bring change in the capital structure.

Cespedes, Gonzales, and Molina (2008) studied the relationship between the ownership concentration and capital structure variables in seven countries of Latin America from 1996 to 2005, using multiple regression techniques. The findings showed the positive relationship between ownership concentration and leverage. Also, they gained a positive relationship between leverage and corporate growth. Hassan and Butt (2009) examined the effect of the corporate governance monitoring mechanisms' ownership concentration

on the capital structure and firm value in listed non-financial firms in the Australian Stock Exchange from 1993 to 2008. The findings showed that there is a positive significant relationship between ownership concentration with firm value, ownership concentration with leverage, and leverage with firm value.

2.9.5 Managerial Ownership and Capital Structure

According to Brailsford, Olive, and Pua (2002), it is not only the firm's characteristics or situational factors that influence the firm's capital structure decisions, but also the managerial ownership structure. The general argument of Bokpin and Arko (2009) was that, the major concern of the firm managers is to retain or even increase their control in the business, therefore, a higher proportion of managerial shareholding will result in higher debt financing for the managers to avoid equity rights dilution. This argument was also supported by Nadeem, et al. (2012) that, managers opt for debt financing in order to reinforce their control and avoid the risk of take overs.

The higher the proportion of managerial shareholding in the firm, the higher the debt financing (Bokpin & Arko 2009), whilst those firms with a lower proportion of managerial shareholding may opt for more equity financing. Several empirical studies found a positive and significant relationship between the proportion of managerial shareholding and debt to equity ratio, (Stulz 1990; Jiraporn & Liu 2008; Bokpin & Arko 2009; Nadeem. et al. 2012; and Agyei & Owusu 2014) with the basic principle that managers increase the firms' debt ratios to consolidate their control.

Another study, wattanakantang (1999), which was conducted in Thailand and is consistence with the ones conducted in Ghana by Bokpin and Arko (2009) and Agyei and Owusu (2014), revealed that managerial ownership is significantly positively related to capital structure decisions.

2.9.6 Institutional Ownership and Capital Structure

Typical institutional shareholders, such as pension funds, mutual funds, insurance companies, corporate firms, and banks, have the capacity to monitor and affect investment strategies to their own benefits. They play key roles in promoting the stakeholders' interests and engagement in their invested firms (Armour, Deakin, & Konzelmann, 2003). Lakshmi (2009) argued that institutional shareholders can reduce the agency costs by monitoring the corporate performance and by ensuring the shareholders' interests. Also, Lev (1988) opined that the institutional shareholders are well informed compared with individual shareholders. This type of shareholder has easy access to different sources of information thereby playing a significant role in the firm's capital structure decisions. The close monitoring of institutional shareholders may force managers to make decisions in the interest of the shareholders. Their ability to pursue self-interests can be reduced, and as a result, the managers may be hindered from employing lower levels of debt to protect their employment risk.

Lakshmi (2009) was of the view that close monitoring of institutional shareholders may force managers to make decisions in the interest of the shareholders, and their ability to pursue self-interests may diminish. As a result, managers may be prevented from

employing lower levels of debt to protect their employment risk. Also, Shleifer and Vishny (1986) showed that institutional shareholders successfully monitor the performance of the management team of the firm because of their positions. Their huge stake in the firm provides the economics for an effective monitoring policy. Shome and Singh (1995) also produced evidence that supports the argument.

In contrast, Pound (1988) challenged the argument. He claimed that large external shareholders may be passive voters. They may collude with insiders against the interests of the dispersed shareholders. In line with this argument, McConnell and Servaes (1995) presented the passive voters hypothesis by relating the large shareholders with firm value. If this happens to be the behaviour of institutional investors, then institutional shareholding and debt level may be negatively related to each other. Crutchleyl, Jensen, Jahera, and Raymond (1999) provided evidence that the association between institutional shareholders and the debt-to-equity ratio is positive and statistically significant. Their empirical study also shows that institutional shareholding and firm debt level are related. They opined that institutional ownership may be related to capital structure. They found that institutional ownership is simultaneously determined with leverage.

2.9.7 External Auditor and Capital Structure

A lot of theoretical literature has long proved that the availability of unbalanced information between the outside investors and the firms will have effects on the firms' financial decisions. There are very few empirical studies that have investigated the association between Big 4 audit firms and the firms' capital structures. Amongst the

available empirical studies is that of Myers and Majluf (1984), which proved how the adverse selection of the external auditor can lead firms to ignore the use of equity financing and forgo profitable investments.

Idrisi (2013) explained that, information asymmetry happens in a situation where one party of a firm has more and precise information about the firm's policies, operations, and performance than another party. One of the primary objectives of corporate governance mechanisms is to reduce asymmetric information. An audited financial statement is an important tool for reducing information asymmetries and maintaining an efficient market environment, and this can be achieved with a high quality audit. Audit quality contributes to the credibility of the firm's financial statement disclosure, and to that extent, investors will be willing to contract with the firm thereby reducing the cost of the capital (Jensen & Meckling, 1976). However, audit quality that could eventually affect the cost of the capital depends on the selection of the external auditor (Abbott & Parker, 2000). Chang, Dasgupta, and Hilary (2009) argued that, the debt ratios of firms are reduced in response to favourable capital market conditions when the firms' financial statements are audited by credible external auditors.

The audit quality provided by an industry-specialised auditor is better than the audit quality provided by the non-industry specialised auditor (Abbott & Parker, 2000). This means that all external auditor may not provide the same level of audit service. The services of industry-specialised external auditors are more expensive, and the best representation for these industry-specialised external auditors are the Big 6 audit firms (Ireland & Lennox,

2002), they are audit firms that are usually thought to provide a higher level of audit quality. The Big 4 audit firms are the four largest auditing firms in the world. They used to be known as the Big 8 before 1989. The Big 8 firms were: Arthur Andersen; Arthur Yong & Co.; Coopers & Lybrand; Ernst & Whinney; Deloitte, Haskins, & Sells; KPMG; Touched Ross; and lastly, Price Waterhouse. In 1989, Ernst & Whinney merged with Arthur Yong & Co. and formed Ernst & Young; and Deloitte, Haskins, & Sells merged with Touched Ross and formed Deloitte Touched and they were since then refer to as the Big 6.

In 1998, Price Waterhouse merged with Coopers & Lybrand to form Price Waterhouse Cooper thereby reducing their status to the Big 5. But, the fall of Arthur Andersen in 2002 led to their present status as the Big 4 with Klynveld Peat Marwick Goerdeler popularly known as KPMG remaining unchanged. These audit firms are now referred to as the Big 4. They are big, have the resources to supply auditors with industrial specialists rather than the non-Big 4 auditors, and also, they have more incentive to perform high-quality audits. According to Chang, et al. (2009), auditor quality influences the financial decisions of firms, because their dual roles of providing quality information and insurance matter to capital market participants.

According to Mansi, Maxwell, and Miller (2004), previous research on the auditor characteristics explained that auditors provide two valuable roles in the capital market: an information role and an insurance role. Investors often use audited financial statements as the basis for their investment decisions (Mansi, et al., 2004), therefore, the choice of the external auditor is an important element of the external corporate governance monitoring

mechanism. Nanyang and Dasgupta (2009) found that firms that select Big 4 audit firms are likely to opt for more equity financing than those that select non-Big 4 audit firms, and those firms are able to build larger equity financing than those audited by smaller audit firms.

Khaled (2009) also argued that investors are able to better anticipate future earnings when the financial statement of the firm is audited by any of the Big 4 audit firms. Al-Hiyari, Abdul Latif, and Amran, (2016) explained how the benefits of goodwill rises in those firms in which their financial statements were audited by the Big 4 auditors. Overall, it can be concluded that, consistent with the dual roles of providing quality assurance and information played by external auditors, this, in turn, is valued by lenders and investors and eventually influences the firms' capital structures.

2.10 Review of Empirical Studies on Firms' specific characteristics

Several empirical studies have examined the firms' and industries' specific characteristics and capital structure decisions. Researchers, such as Odedokun (1995), Olatundun (2002), Eboh (2004), Salawu (2007a), Kajola (2008), Adesola (2009), Ezeoha and Francis (2010), and Shehu (2011) carried out works which relate to the determinants of Capital Structure in Nigeria and their findings did not agree on the common attributes in the capital structure of the Nigerian firms.

A number of firm-level characteristics have been identified by researchers as firm characteristics variables that influence capital structure decision of a firm. Such

characteristics include; firm age, profitability, size of the firm, asset structure, firm risk, growth, and taxation. Others are: firm's location entrepreneur's educational background and gender, the form of business and expert status of the firm. It is worthwhile to investigate the influence of firm characteristics on capital structure in domains like developing countries. This would provide answers to questions such as; is there are differences in the predictability of determinants of capital structure between developed and developing economies?

Olowoniyi, Akinleye, and Afolabi (2012) investigated the determinants of capital structure of listed firms in Nigeria. The study employed Panel Econometric approach to analyse panel data obtained from 70 listed firms for the period 2000 to 2009. Their findings suggest that expected growth and size influence stock return positively while tangibility has a negative influence on the capital structure of listed firms.

Also, Shehu (2011) investigated the determinants of capital structure in Nigerian listed insurance firms between 2001 and 2010. The analysis were performed using panel data pertaining to 15 insurance firms obtained from the annual report of the sampled firms, using multiple regressions as a tool of analysis. The entire result reveals that leverage is negatively correlated with firm's size and age while profitability and tangibility are positively correlated with leverage. However, a negative relationship between Growth opportunity and leverage was found, a study conducted by Garba (2010), where they examined the determinants of capital structure from a sample of Nigerian companies in the health-care sector from 2001 to 2010 using multiple regression. The result reveals that all

the independent variables, which include profitability, size, tangibility and firm growth have a significant negative relationship with leverage.

Little attention is paid to some studies carried out in Nigeria that focussed on the relationship between local corporate ownership and capital structure decision. Iwarere and Akinleye (2010), David and Olorunfemi (2010), Ezeoha and Francis (2010) worked in this area. There have been several studies on capital structure focusing on various regions and countries. This section addresses such studies on firm's size, firm's age and firm's growth, so as to provide an insight into the various trends on the subject.

2.10.1 Firm's Size

One of the variables that are considered very important determinant of capital structure is the firm's size. Among other reasons given is that bigger firms are usually spread out in term of operations, thus their tendency to liquidation is very low (Rajan & Zingales, 2005). Abiodun (2014) also viewed firm's size as a variable that has the quality to determine a firm's capital structure, researcher frequently use it as a control variable in corporate finance study.

Previous empirical studies have provided sufficient evidence that there is a notable and positive association between the firm's size and capital structure resolution. Some of these studies include: Friend and Lang (1988); Barclay and Smith (1996); Barton, Ned and Sundaram (1989); Mackie-Mason (1990); Kim and Sorensen (1986); Al-Sakran (2001); Hovakimina, Hovakimian and Tehranian (2004). Furthermore, the following scholars also

worked on the relationship between firm's size and capital structure; Daskalakis and Psillaki (2008); Heyman, Deloof and Ooghe, (2008); Tarus, Nehemiah, and Geoffrey (2014) and Chechet, Ishaya and Olayiwola (2014). Most of these scholars believed that bigger firms normally use debt financing while those smaller ones probably tend to use the equity in their financing.

Al-Sakran (2001); Hovakimian et al. (2004) and Ogbulu and Emeni (2012) found a positive relationship between firm's size and the capital structure decision. Hassan (2011) also argued that firm's size has a sufficient quality to determine the capital structure of listed insurance firms in Nigeria. However, as expressed in Abor (2008), a contrary association exist between firm's size and short-term debt ratio in the studies of Caesar and Holmes (2003), Esperanca, Ana and Mohammed (2003) and Hall, Hutchinson and Michaelas (2004).

Also, Phillips and Sipahioğlu (2004) and Tang and Jang (2007) in their studies on publicly listed firms in U.K. and USA., respectively could not find evidence of the relationship between the debt ratio and firm's size. Similarly, Karadeniz, Kandir, Balcilar, and Onal, (2009) in their study in Turkish listed firms reported that firm's size and capital structure don't appear to be related.

2.10.2 Firm's Age

Another variable that is considered very important determinant of capital structure is the firm's age. In this study, age of the firm is introduced as an independent variable. Though

theoretically, the connection between the firm's capital structure decision and the age of the firm is still not clear. How long a firm is in its operation means the firm's age. This factor determines the firm's reputation and this is gathered from what they undergo over the years which resulted in goodwill. As firms function for over a long period, it manifests and strengthens itself as an on-going concern. This builds the chances of the firm to opt for more debts. It can, therefore, be argued that the relationship between firm age and capital structure decision is materially positive.

Previous empirical studies have provided sufficient evidence that there is a remarkable positive association between the age of the firms and the designing of its capital structure (Petersen & Rajan, 1994; Hall, et al., 2004; Abor, 2008; Dewaelheyns & Van Hulle, 2010; Ezeoha & Botha 2012; Chechet & Olayiwola, 2014; Ahmad & Aris, 2015). The general point of their studies is that it agreed with the trade-off and agency cost assumption which predicted that firm's age relate with debt to equity ratio positively. Older firms have better access to debt financing since they have established a good relationship with the lenders who keep the track of the firm's financial record and reputation to be a positive record, as it is contained in most of the above empirical studies.

2.10.3 Firm's Growth

Another variable that is considered a very important element that influences the capital structure is the firm's growth. Studies like Myers (1977) postulated that, if firms are anticipating future growth, they possibly opt for higher equity financing base on the assumption that they may likely miss profitable investment chances if they have high

leverage ratio. Marsh (1982) in his own argument stated that, the vision of the firm for future expansion needs additional financial obligation to the internal reserve of the firm thereby forcing the firm to source for external debt. He concluded that if a firm is highly anticipating future expansion, they will opt for relatively higher debt ratios. Furthermore, Hall et al., (2004) argued that growth is probably going to force a higher request on firm's internal reserves thereby leading to demand external debt. Zeitun and Tian (2007) also, argued in support of this that possibility for firm's growth can have a vital impact on the determinant of firm's potential and that firm with potentialities for growth are able to create more from investment opportunity.

Previous experimental investigation on the association between firm's growth and the firm's capital structure is mixed and indecisive. A positive relationship was reported in some studies like: Kester, (1986); Titman and Wesses, (1988); Chechet and Olayiwola (2014); and Ahmad and Aris (2015).Whilst other studies argued that firms with higher expansion rate use little debt financing. Some of the studies in support of this inverse relationship argument include: Kim and Sorensen (1986); Stulz (1990); Rajan and Zingales (1995); Roden and Lewellen (1995) and Al-Sakran (2001).

2.11 Control variables: Macroeconomic variables and Capital Structure

Several empirical studies have been carried out to find out what the factors are that influence a firm's capital structure. Nonetheless, in the majority of the studies, they offer consideration solely to firm-specific characteristics and only a paucity of the studies consider the influence of the macroeconomic factors (Elliott, Koëter-Kant, & Warr, 2007;

Elliott, Koëter-Kant, & Warr, 2008; and Huang & Ritter, 2009). However, some have shown that the country's fiscal policy and the macroeconomic factors play a vital role in the firm's capital structure decisions (Booth, et al, 2001; Deesomsak, Paudyal, & Pesce, 2004; Bancel & Mitto, 2004; Harkbarth, Miao, & Morellec, 2006; Muthama, et al., 2013; and Anila Çekrezi, 2013). Perera and Gunadeera (2015) established that macroeconomic factors influence the direction and the size of firm capital structure; thus, due consideration needs to be given to the state of the business environment as well.

Booth, et al, (2001) argued that an increase in inflation forces lenders to sell bonds in exchange for stock, thereby leading to a reduction in the total and long-term debt ratios, particularly in emerging economies. Riaz, et al. (2014) documented that the GDP growth rate of the country is very important for effective and sustainable decision making on firm capital structure policies. Booth, et al. (2001) argued that, there is likely to be an increase in the stock prices during the economic growth which may lead the firms to opt for a lower debt ratio. Abzari, Fathi, and Nematizadeh (2012) documented that the GDP growth rate that states the overall economy of the country, interest rate which is measured by the prime lending rate, and the inflation rate are vital macroeconomic factors that have significant influence over the firms' financial choice.

Ajao and Ema (2013), in a study on the determinants of the capital structure in Nigerian firms, discovered some country-specific factors, such as cultural setting, development of capital markets, monetary policies, political risk, and fiscal policies, as major determinants of capital structure; and, they recommended that major country-specific factors should be

considered carefully in determining the capital structure of a firm. Korajeczyk and Levy (2003) also argued that a firm's decision on the source of finance can be influenced by firm-specific characteristics and macroeconomic factors as a firm issues more securities during favourable macroeconomic conditions. Antoniou, et al, (2002) noted that it is not the firm's specific characteristics alone that exclusively influence the decisions on capital structure, the close business environment and the economic situation also influence decisions on capital structure.

From previous empirical studies, it has been observed that the Market Timing Theory (MTT) is the one related more to the capital structure decisions of firms with the prevailing macroeconomic conditions (Huang & Ritter, 2009; Bougatef & Chichit, 2010; and Khanna, Srivastava, & Medury, 2014). Furthermore, Baker and Wurgler (2002) and Frank and Goyal (2009) based their arguments on the theory, stressing that decisions on capital structure are dependent on the type of market that appears to be more favourable. According to them, the fund-raising could be suspended, if neither of the market conditions appears favourable or could even raise funds, though not presently needed, if the market conditions appear unusually favourable. The ability of the firms' managers to time the market conditions so as to raise capital cheaply is emphasised in the MTT.

From the study conducted by Graham and Harvey (2001), the sample of the Chief Executive Officers admitted that they studied the stock market conditions before making the selection of the financing option; and also, the market timing theory played a crucial role in their capital structure decisions. Furthermore, Khanna, Srivastava, and Medury

(2015) also argued that the firms, considerably, time the market conditions, and at the same time, strengthen their level characteristics. Therefore, the fluctuations in macroeconomic factors have a direct relationship with capital structure and they can influence the decision, significantly, either in the short-run or in the long-run (Khanna, Srivastava, & Medury 2015).

Thus, this section of the research has concentrated on the relationship that exists between some macroeconomic variables and the capital structure decisions of the firms in the context of Nigeria's economy. It has explored how macroeconomic conditions influence a firm's capital structure decisions by invoking a select set of macroeconomic variables. The variable selected were: the Growth Domestic Product (GDP) growth rate, Inflation rate, and Bank Lending rate, largely based on the capital structure literature and data availability.

2.12 Summary

This chapter has reviewed the literature in relation to the corporate governance mechanisms and firms' specific characteristics on the capital structure decisions in the developed and developing economies. Also, it explained some macroeconomic indicators as control variables. It identified the dearth of empirical studies in highly volatile and debt-financing environments, such as Nigeria, where the stock markets are resilient to volatility in the environment and with many firms with high debt ratios. This chapter also reviewed the theories that are relevant to corporate governance, firm characteristics, and capital structure. Lastly, this literature review has been used to design the conceptual framework and develop the relevant hypotheses in this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Brief Research Methodology

This research work has explored the influence of the corporate governance monitoring mechanisms and firm-specific characteristics on the capital structure of the listed firms in Nigeria. Thus, the panel data regression analysis was applied since the study was to examine the time variance effects across firms.

The population for this study consisted of one hundred and six (106) firms out of the total one hundred and fifteen (115) non-financial listed firms in the Nigerian Stock Exchange (NSE) over a five-year period (5-years) (2012-2016). Financial firms were excluded because their capital structures are exogenously determined by the monetary regulatory authorities with no reference to the investment, operational, or fiscal considerations of these financial institutions. Furthermore, the accounting information disclosed and the nature of services rendered by the financial institutions are quite different from the other sectors. The total number of non-financial listed firms in the Nigerian Stock Exchange (NSE) was 115, however, a total of nine (9) firms that did not have complete records or were not in existence between 1st January 2012 and 31st December 2016 were excluded. Therefore, the total number of one hundred and six (106) non-financial listed firms was used for this study.

The information regarding the individual firm's corporate governance mechanisms, firm-specific characteristics, and their capital structures was obtained through the firms' annual reports, the Nigerian Stock Exchange fact book, and the handbook of the Nigerian Stock Exchange. Whilst the macroeconomic information was obtained through the annual reports of the Central Bank of Nigeria and other global economy reports.

Table 3.1
Sample selection procedure; Summary (106 Firms 2012 -2016)

Criteria	Number of firms	No. of observation (firm X 5)
Firms Listed on the Nigeria Stock Exchange 2012-2016	172	860
Less		
Finance, Insurance and Investment Firms	-57	-285
Non-financial listed firms	**115**	**575**
Less		
Firms delisted or newly listed between 2012- 2016	-5	-25
Firms with unavailable data on corporate governance and Financial statement	-4	-20
Final firm sample	**106**	**530**
Final observation		**530**

Table 3.2
List of sectors under non-financial firms

Non-Financial Sectors	Number of Sample firms	Number of Excluded firms	Number of firms
Agriculture Sector	5	0	5
Conglomerates Sector	5	1	6
Construction/Real Estate Sector	7	1	8
Consumer Goods Sector	20	2	22
Healthcare Sector	9	2	11
Industrial Goods Sector	16	0	16
Information Communication Technology (ICT) Sector	6	1	7
Natural Resources Sector	4	0	4
Oil and Gas Sector	11	1	12
Services Sector	23	1	24
Total	**106**	**9**	**115**

In addition to the above, core data sources like the National Bureau of Statistics Nigeria, previous related empirical studies, and books were the important documents that were referred to by the researcher to make the study robust. A pure quantitative set of secondary data was used in this study, whilst the data were analysed using the STATA 13.0 software

package with suitable statistical and econometric tools for investigating the association between the two groups of independent variables: corporate governance mechanism variables and firm-specific characteristics, on capital structure decisions.

3.1 Structural Framework

This study conceptualised that the capital structure level (debt ratio) is a function of the corporate governance mechanisms and the firm-specific characteristics. The following structural framework, therefore, depicts the relationship between debt ratio, corporate governance mechanisms, and firm-specific characteristics. Capital structure was recognised as the dependent variable in this study, whilst corporate governance mechanisms and firm-specific characteristics were considered as the independent variables. According to Green, et al. (2002), micro and macro policy issues influence firms' capital structure decisions; thus, macroeconomic variables were considered as the control variables so as to determine the influence of macroeconomic issues on the firms' capital structures.

The proxies used for the corporate governance mechanisms were: board size, board meetings, board independence, block holder ownership, managerial ownership, and institution ownership, whilst the choice of Big 4 external audit firms were used as a proxy for the external corporate governance mechanisms. The proxies used for firm characteristics were: firm age, firm size, and firm growth. In the capital structure, the debt ratio was viewed as the key ratio to determine the capital structure in the organisational

perspective (Jensen, 1986; Bhagat & Bolton, 2008). For the purpose of this study, capital structure was tagged as debt ratio and it was defined as follows:

DR = TDR = Total Debt / Total Debt + Total Equity (Total Asset) (1a)

Where 'DR' (Debt ratio) represented the total debt ratio (TDR), which was used as the proxy of the capital structure in the main analysis of this study. Total debt was the addition of items listed in the non-current and current liabilities' sections of the listed firm's financial statement, and the addition of the total debt and total equity represented the total assets of the firm.

Moreover, for the robust analysis, the debt ratio was viewed from two other debt ratios- the long-term debt ratio (LTDR) and short-term debt ratio (STDR), and a comparison was made between the results obtained from 1a, 1b, & 1c. Long-term debt included items listed in the non-current liabilities' section of the listed firm's financial statement. Whilst short-term debt included items in the current liabilities.

DR2 = LTDR = Long-Term Debt / Total Debt + Total Equity (1b)

DR3 = STDR = Short-Term Debt / Total Debt + Total Equity (1c)

The reason for investigating the other two debt ratios, was to examine whether corporate governance mechanisms and firm characteristics would have different influences on different debt ratio measurements (total debt, long-term and short–term debt ratios) of all

the listed firms in Nigeria. Previous research, including Echekoba and Ananwude (2016), has shown that Nigerian firms relied more on short-term debt than long-term debt, whilst some did not use long-term debt at all. According to Bevan and Danbolt (2002), the analysis of capital structure is incomplete without a detailed examination of all forms of the firm's total debt, because the determinant of the debt ratio depends upon which component of debt is being analysed (Bevan & Danbolt 2002). Long-term and short-term were defined as follows:

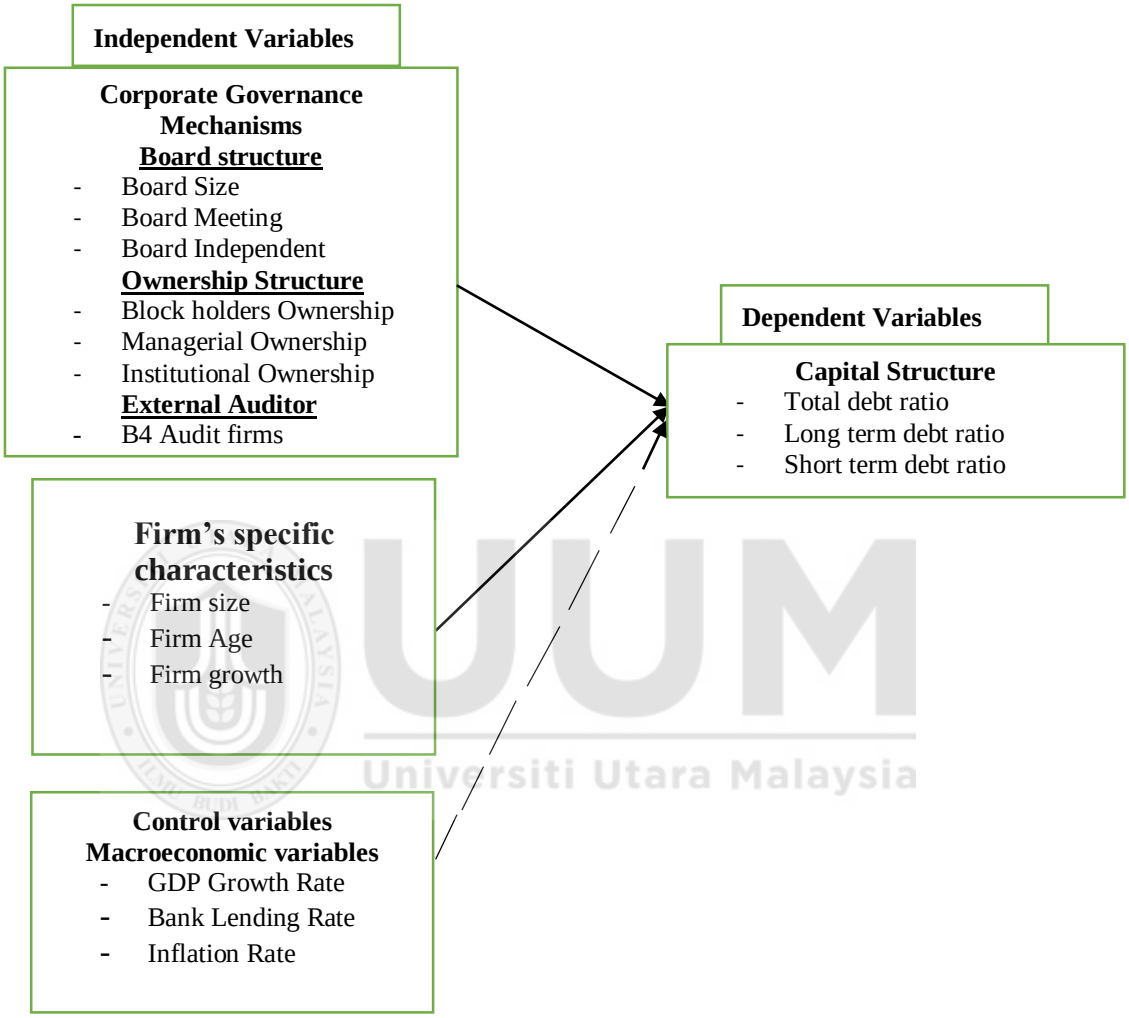

Figure 3.1
Structural Framework

3.2 Hypotheses Development

In spite of the consequential role of corporate governance mechanisms on firms' capital structure decisions, evidence from the available experimental investigation in not really convincing in regards to how the corporate governance procedures influence the capital structure decisions of firms. And, at the same time, it was noticed that corporate governance practices in each country are different from each other depending on the economy and culture that shape the corporate governance procedures. In addition, corporate governance practices vary, not only across countries, but also across firms and industry sectors. Despite that, there is a paucity of empirical investigations that have studied the influence of corporate governance mechanisms on firms' capital structure decisions in developing economy countries like Nigeria. This section provides the hypotheses associated with the corporate governance mechanisms, firm-specific characteristics (independent variables), and capital structure decisions (dependent variable).

Generally, the concept of corporate governance practices is built around the association between the owners (principal) and the management (agent) of the firm. And the agency theory suggests that ownership and board structure could be used to mollify the conflict of interests between agents and owners (Jensen & Meckling, 1976). Jensen (1986) suggested that debt could be used as a controlling device to motivate managers to distribute free cash amongst shareholders instead of wasting it on inefficient activities. Grossman and Hart (1982) suggested that the use of debt increases the chances of bankruptcy and job loss which further motivates managers to use the organisational resources efficiently and reduce their consumption. Kyereboah-Coleman (2007) argued that, firms use more debt in their

capital structure, especially when management is pressurised by the shareholders to use funds efficiently so as to be able to meet-up with future cash flows. The agency theory suggests that there are several ways in which debt can help mollify the agency conflicts between shareholders and managers (Jensen, 1986). For instance, the introduction of convertible bonds into the existing capital structure gives the bondholders the right to covert debts into equity under some conditions, and this conversion right reduces the conflict of interest between shareholders and managers. Shareholders also promote debt financing so as to use debt to restrict the free cash flow available in the firm (Jensen, 1986).

Corporate governance determines the firm's organisational structure, and different corporate governance mechanisms play different functions in the corporate governance. These different functions influence the firm's financing choice and affect the level of debt and equity that the firm will prefer (Shi, 2010). Therefore, a firm's capital structure decision depends on the board and ownership structure that actually control the firm (Pindado & La Torre, 2011). These control and monitoring mechanisms result in agency costs, and the agency costs are endured entirely by the equity shareholders (Rashid & Islam 2013; Baulkaran, 2014; and Kay & Vojtech, 2016).

The relationships between the corporate governance mechanisms and the capital structure have been hypothesised in this study by following the agency theory of Jensen and Meckling (1976) and Jensen (1986), which indicates that there are significant relationships between the corporate governance mechanisms and the firms' capital structure policies. Within the context of this study, the corporate governance mechanisms employed were:

board structure (board size, board meetings, and board independence), ownership structure (block holder ownership, managerial ownership, and institutional ownership), and external auditors (Big 4 audit firms). The decision was based on Nigeria's context as an emerging economy with distinct corporate governance practices and data limitations.

3.2.1 Board Size

Board size is the number of directors that constitute the board of directors of the firms who are managing the activities of the firms and making strategic financial decisions. Previous accounting and finance research has established that there is a link between the number of directors on the board and the firm's capital structure decision (see for example, Bodaghi & Ahmadpour, 2010; Sheikh & Wang, 2011; Ganiyu & Abiodun, 2012; Heng & Azrbaijani, 2012; Hussainey & Aljifri, 2012; and Shafana, 2016). However, the empirical results from these various studies on the degree and direction of their relationship were mixed.

According to Jensen (1993), the board size is inversely related to the board's ability to recommend and participate in long-term planning, because of the burdensome relation with organising and coordinating a higher number of directors. Berger, et al. (1997); Abor and Bikpie (2006); Abor (2007); and Hassan and Butt (2009), contended that firms with a higher number of board memberships prefer low debt levels, and that larger boards might emphasise the owner-manager to use a lot of equity financing so as to enhance firm performance. The implication was that a higher number of board directors might exert considerable pressure on the firm's management to opt for lower gearing levels and

strengthen firm performance. Therefore, firms with larger board size are inclined to use a lower proportion of debt in their capital structures.

Heng and Azrbaijani (2012) investigated how board size relates to firm leverage and found out that, the relationship between the number of board members and debt to asset ratio is inverse. Bodaghi and Ahmadpour (2010) examined the relationship between leverage and board size in Tehran firms, and established that an inversed relationship existed between leverage and board size. However, Shafana (2016) argued that board size, board independence, and CEO duality have no remarkable impact on the firm's capital structure decision.

Adams and Mehran (2002) maintained that some firms need a large number of board members for powerful supervision. Sheikh and Wang (2012) studied firms in Pakistan and found that the board size was positively associated with the firms' debt ratios. Hussainey and Aljifri (2012) conducted a study in the United Arab Emirate and found that the board size was related to the debt ratio, positively. Ganiyu and Abiodun (2012) conducted experimental research on the listed firm in Nigeria and established a positive relationship between the board size and capital structure, and also suggested that a board with a large number of members can easily apply effective monitoring and control over the firm's operation.

The agency theory's assumption postulates that the principal and agent relationship influences the firm's choice of financing. The theory suggests that a higher number of

board memberships may prefer low debt so as to reduce firm risk and to protect their investments, whilst a small number of board members may use debt as a substitute mechanism to reduce the agency cost (Berger, et al., 1997). Based on the agency theory assumption that a larger board size prefers monitoring control mechanisms rather than debt control mechanisms, leading to a lower debt ratio, this study hypothesised that:

H_1: There is a significant negative relationship between **board size** and debt ratio.

3.2.2 Board Meetings

Several empirical studies have been carried out on corporate governance practices and firm performance, however, very few studies focus on the impact of board meetings on capital structure. The financing and capital structures designed by firms are based on the board of directors' decisions, and in compliance with the corporate governance code of best practices. Saad (2010) examined the level of compliance amongst the listed firms in Malaysia with the implementation of the corporate governance code of best practices in Malaysia and reported a significant negative relationship between the board meetings and capital structure.

On the contrary, Shafana (2016) studied the influence of the board of directors' characteristics on the capital structure decisions of the profitable non-financial firms in Sri Lanka. He argued that board meetings had a significant and positive impact on the capital structure decisions; whereas, the number of directors, number of independent directors, and CEO duality did not have any appreciable impact on the capital structure decisions. Similarly, Imran and Farhan (2016) found a significant positive relationship between

average board meeting attendance and debt ratio. They argued that with frequent board meetings and a high attendance of directors, the firm has the ability to use monitoring mechanisms to monitor the operations of the firm, and lenders will not hesitate to provide debt to such a firm.

The board meeting is an element of the corporate governance mechanisms in controlling and monitoring the firm's operation, which according to the agency theory has influence on the firm's choice of financing. Higher Frequencies of board meetings are an indication that the board prefers the monitoring control mechanisms rather than the debt control mechanisms thereby reducing the debt ratio. Thus, this study hypothesised that:

H_2: There is a significant negative relationship between the **board meetings** and the debt ratio.

3.2.3 Board Independence

Board independence is another factor that has been given more attention by researchers and policymakers. Board independence is the percentage of independent and non-executive directors (outside directors) serving on the firm's board of directors. Wen, et al., (2002) predicted the existence of a significant negative association between the debt ratio and the representation of non-executive directors on the firm's board of directors. They argued that non-executive directors monitor the managers more effectively and efficiently, thus forcing the managers to seek a lower debt ratio for achieving better performance.

In contrast, Awan, Rashid, and Zia-ur-Rehman (2011) investigated the association between the board independence and the capital structure of the listed manufacturing firms on the Karachi Stock Exchange and Lahore Stock Exchange for the Textile sector and found a significant positive relationship. Similarly, Ajanthan (2013) and Rehman, et al. (2010) found a positive association between board composition and debt ratio. Berger, et al. (1997) hypothesised that a board with more independent directors monitors the managers more actively, thus making the managers adopt more debt financing. The scholars' arguments prove the significant relationship between board independence and capital structure, and the principal-agent relationship of the agency theory assumption that, agents (managers) face vigorous monitoring when the principal (board of directors) is controlled by independent directors. The agency theory postulates that a higher percentage of independent directors on the board will have a negative influence on the firm's leverages, therefore, this study hypothesised that:

H_3: There is a significant negative relationship between **board independence** and the debt ratio.

3.2.4 Block Holder Ownership

Block holder ownership refers to the equity shareholders ownership of at least five per cent (5%) of a firm's equity shares (Brailsford, Oliver, & Pua, 2002; Fosberg, 2004; Farouk & Luka, 2013; Agyei & Owusu, 2014; Miko, & Kamardin, 2015b; and Abobakar & Elgiziry, 2016). Block holder ownership is a situation where one or a few of the equity holders control a minimum of 5 per cent of the equity shareholdings (Abobakr, & Elgiziry, 2016; Okafor, Ugochukwu, & Hillary 2016). In this study, following these scholars' opinions,

block holder ownership was measured as the percentage of equity shares held by a large number of shareholders who held a minimum of 5% of the outstanding equity of the firm. Block holder ownership may help to mitigate the agency problems between the shareholders and the managers (Nadeem & Sheikh, 2012) as empirical studies revealed a significant relationship between block holder ownership and debt ratio.

The relationship between block holder ownership and capital structure is still mixed to some extent. Many empirical studies (Brailsford, et al., 2002; Abobakr, & Elgiziry, 2016; and Okafor, et al., 2016) agreed that large investors may have motivation and influence for controlling and monitoring the firm's management, which affects the capital structure decision. Thus, this makes it difficult for the managers to adjust the debt level for their own interests. Block shareholding may help to reduce the agency cost problem because of the opportunism level of the agent (managers) that will, accordingly, lead to a reduction of the conflicts between the principal and the agent (Abobakr, & Elgiziry, 2016).

Berger, et al. (1997) found that the debt ratio increased when there was an increase in block holder ownership. Brailsford, et al. (2002) argued that as block holder equity rights increase, their voting power and influence also increases, giving block holder owners the motivation to control the actions of the managers, thus the firms' debt ratios are likely to be on the increase. Therefore, the debt ratio can be expected to be more when firms have higher block holder ownership (Brailsford, et al. 2002).

Chidambaran and John (2000) argued that ownership concentration plays a significant role in conveying information on firm activities to other shareholders. Fosberg (2004) proposed that managers are obliged to use more debt when an influential monitor exists, thus firms with large investors use debt more than firms without such investors. Consequently, the debt ratio is expected to be higher in firms with higher ownership concentrations.

On the contrary, Pound (1988) argued that block holders may be passive voters who conspire with managers against the interests of the dispersed equity holders. The block holder ownership may be negatively related with the firm debt ratio in that situation (Pound, 1988).

The agency theory has established that block ownership leads to efficient monitoring of the management at a lower cost (Jensen & Meckling, 1976). And efficient monitoring may cause the managers to lower the debt ratio; thus, managers seek lower leverage when faced with stronger monitoring. Therefore, this study hypothesised that:

H_4: There is a significant negative relationship between **block holder ownership** and the debt ratio.

3.2.5 Managerial Ownership

Empirical research has found mixed results concerning the linkage between managerial ownership and capital structure. Wiwattanakantang (1999) and Bokpin and Arko (2009) established a negligible association between managerial ownership and capital structure, whereas some other research investigations have established diverse outcomes concerning the linkage between managerial ownership and capital

structure. Bathala, Moon, and Rao (1994) and Zou and Xiao (2006) declared that there is a negative association between managerial ownership and capital structure. They argued that a firm with a high proportion of debt ratio faces bankruptcy risk, therefore, equity financing will be more attractive for the managers to maintain their interests and positions. This is an indication that managers seek to avoid debt, but it is contrary to Stulz's (1988) theory that managers use leverage to inflate the voting power of their equity.

According to Short, Keasey, and Duxbury (2002), an organisation with higher managerial ownership has more debt capital financing than firms with lower managerial ownership. Bokpin and Arko (2009) revealed that the managerial ownership had a significant positive relationship with the long-term debt ratio in Ghana firms. They confirmed that an expansion in the debt ratios assisted the managers to strengthen their control and prevent takeovers, and with higher debt ratios, the managers could have additional funds to achieve their own interests.

Mehran (1992) also proclaimed a favourable linkage between managerial ownership and capital structure suggesting that ownership in firms causes the managers to expand the firm debt financing. Berger, et al. (1997) declared a notably positive association between debt financing and managerial ownership indicating that managers whose monetary benefits are associated with external shareholders can adopt more debt financing to boost the value of the firm. More recently, Le (2015) also established a positive and significant association between firm leverage and managerial ownership.

Brailsford, et al. (2002) argued that the linkage between managerial ownership and capital can be nonlinear. If the managerial ownership decreases, the agency dispute will decrease, leading to a higher debt ratio. However, Brailsford, et al. (2002) argued further that, if the management already holds an appreciable ownership of the firms' equity, then an expansion in managerial ownership can result in a lot of managerial opportunism, and it will generate a lower debt. Jensen and Meckling (1976), in using the agency theory, argued that, managers may prefer less debt, because of their desire to reduce firm risk and to protect their diverged human capitals. Empirical studies have proved the existence of the relationship between managerial ownership and debt ratio. Thus, this study hypothesised that:

H_5: There is a significant negative relationship between **managerial ownership** and the debt ratio.

3.2.6 Institutional Ownership

Institutional ownership refers to the institutional investor. Some of these institutional investors are stock mutual funds, pension funds, and corporate firms that control substantial equity rights in a firm (Al-Najjar & Taylor 2008). There are empirical studies that show that institutional ownership and firm capital structure are related, however, the empirical results on their relationship with debt ratio have been mixed. (Al-Najjar and Taylor, 2008; Bodaghi and Ahmadpour, 2010; and Hussainey & Aljifri, 2012).

Al-Najjar and Taylor (2008) argued that, institutional shareholders have a better experience in gathering and interpreting information and, accordingly, can minimise

agency costs. Al-Najjar and Taylor (2008) revealed a significant positive relationship between institutional ownership and debt ratio in their study. Arguing further that institutional investors have a strong influence on supervising the firm's managers thereby reducing agency problems. In consistency with this, Abdoli, Lashkary, and Dehghani (2012) also found a positive relationship. They argued that institutional investors have easy access to different sources of debt financing, such as loans or bonds. A similar proposition was made by Michaely and Vincent (2012) who reported that higher institutional shareholders may lead to improved shareholder rights and stronger shareholder influence. This, in turn, will enable investors to mandate management to introduce more debt in order to lower management discretion.

On the contrary, Hussainey and Aljifri (2012) detected a significant negative relationship between institutional ownership and debt ratio. This indicates that, firms that have more of their equity shares held by institutional investors employ less debt financing. The agency theory postulates that an optimal debt ratio and ownership structure can minimise agency costs, the theory also suggests that, firms with high debt ratios signal that the firms are facing a future of financial distress as reported by Hussainey and Aljifri (2012). Therefore, institutional shareholders may prefer firms with lower debt ratios thereby using monitoring mechanisms. The monitoring mechanisms of the agency theory's assumption is that the agency problem will be reduced and the manager will be mandated to opt for low debt so as to reduce the firm's risk and to protect their investments. Therefore, this study hypothesised that:

H_6: There is a significant negative relationship between **institutional ownership** and the debt ratio.

3.2.7 Big 4 Audit Firms

Empirical evidence that links the influence of the external auditor choice on the firm's capital structure is limited, however, the external auditor choice is very important in determining the audit quality, and this will, eventually, influence the cost of the capital (Abbott & Parker, 2000). Chang, et al. (2009) documented that, auditor quality is relevant to the firms' capital structure decisions. Chang, et al. (2009) argued further that, firms with Big 4 auditors have less debt ratio and higher equity ratio relative to the debt ratio compared with firms not using Big 4 auditors. Also, one of the key capital structure determinants for firms operating in a financially constrained business environment is the external auditing quality (Ojo, 2011). According to Mansi, Maxwell, and Miller (2004), the literature on auditor characteristics disclosed that external auditors provide information and insurance roles to capital market participants, which contributes to the credibility of the financial information. However, there is a paucity of empirical evidence that relates the external auditor choice and the firms' capital structure decisions.

In relation to the pecking order theory, many theoretical and empirical studies have agreed that the pecking order theory is based on information asymmetries, and based on this information asymmetry, firms use a specific order when it comes to financing choice, but normally prefer debt to equity financing (Kennedy, 2013). Bharath, et al., (2009) used a new information asymmetry index, and the degree of the information asymmetry was

considered as one of the determinants of firm capital structure decisions. They proved that asymmetric information has propelled the capital structure decisions of the United State of America's firms. In turn, external auditors play a key role in assuring the integrity of the information. Khaled (2009) proved that when the financial statement of a firm is audited by Big 4 audit firms, the level of the firm's asymmetric information between the firm and the investor is decreased; thus, the investor can foresee subsequent earnings in the stock exchange market. Abbott and Parker (2000) declared in their investigation that the industry specialist auditor's results yielded better audit quality than the non-industry specialist auditor, and the best illustration for auditors with industry specialists is the Big four auditors.

Al-Hiyari, et al. (2016), confirmed this argument by maintaining that Big 4 audit firms render higher audit standards than other smaller audit firms, meaning that Big 4 audit firms normally provide a higher degree of standard audits related to the high audit fees. This higher audit fee implies that the audit quality ought to decrease the agency conflicts between the firm manager and the outside investors, thus having influence on the firm's capital structure decision. Chang, et al. (2009) postulated that, the auditor quality affects the financing decisions of the firms, and that higher audit quality reduces the impact of market conditions on the client's capital structure.

Chang, et al. (2009) argued that auditor quality is sort of vital for the progress of the firm, and the selection of auditor quality is absolutely essential to the success of the firm's financial decision as auditors play a key role in guaranteeing the fairness of the financial

statements and decreasing unbalanced information. They proved that firms audited by Big 4 auditors are able to make large equity shares which result in a low debt in the capital structure. They found that firms audited by Big 4 firms have less debt in their capital structure. Using the agency theory assumption of monitoring mechanisms, this study, hypothesised that:

H_7: There is a significant negative relation between **Big 4 audit firms** and the debt ratio.

3.2.8 Firm's Size

Friend and Lang (1988) studied the impact of managerial self-interest on a firm's capital structure and found that larger firms have better access to debt; they are able to employ more debt financing as compared with smaller firms. Their argument is also supported by Shivdasani and Zenner (2005), where they argued that larger firms are more diversified and are less exposed to bankruptcy.

Several empirical studies confirm that the relationship between a firm's size and capital structure is a significant positive relationship,(studies such as, Barclay & Smith, 1996; Friend & Lang, 1988; Barton, et al., 1989; Mackie-Mason, 1990; Kim, Mauer, & Sherman 1998; Al-Sakran, 2001; and Hovakimian, et al., 2004 as contained in Abor, 2008). These studies concluded that larger firms tend to use more debt whilst smaller ones are more likely to use more equity, in their respective capital structures.

The relationship between firm size and capital structure can be viewed from the asymmetric information of the pecking order theory and the bankruptcy cost of the trade-off theory

perspectives. The pecking order theory postulates that, the debt ratio will increase when the investment exceeds the internal source, and decrease when the investment is lower than the internal source (Carmen, Joseph, & Benjamin 2011). This indicates that investment size influences debt ratio. Similarly, the trade-off theory assumes that, financing deficit or surplus is the main channel that firms normally use to adjust their debt ratio (Carmen, et al, 2011). Empirical studies also demonstrate the existence of a relationship between firm size and capital structure. Based on the pecking order assumption, this study, therefore, hypothesised that:

H_8: There is a significant positive relationship between the **Firm's size** and the debt ratio.

3.2.9 Firm's Age

The age of a firm can be assumed as a proxy for experience, and an older firm should be able to withstand, better, a critical economic problem than a new firm. In this study, the age of the firm was measured as the number of years since its incorporation. The theoretical relationship between a firm's age and the capital structure decision has been argued by many scholars (Dewaelheyns, et al., 2010; Ezeoha & Botha, 2012; Chechet & Olayiwola, 2014; and Ahmad & Aris, 2015). The pecking order theory postulates that the use of debt financing is reduced with the age of the firm. The argument is that, firms are able to build up a significant amount of retained earnings as they grow older in the business, indicating a negative relationship between firm age and debt ratio (Ahmad & Aris 2015). Ahmad and Aris (2015), in their study, reported a significant negative relationship between firm age and all the debt ratio measurements, this is in consistency with the pecking order theory.

On the contrary, the trade-off and agency theories postulate a positive relationship between firm age and debt ratio (Varun, 2014). The assumption is that, firms that have been in business for a longer period have better access to debt financing. The empirical studies by Dewaelheyns and Van Hulle (2010); Ezeoha and Botha (2012); and Chechet and Olayiwola (2014) tend to support the trade-off and agency theories. They discovered a significant positive relationship between a firm's age and the capital structure. They supported the argument that older firms in the industry have better access to debt financing because they have established a relationship with lenders who keep track of their financial records and reputations. On that basis, both the theoretical and empirical arguments provide that there is a relationship between firm age and debt ratio. Using the trade-off assumption that older firms have better access to debt financing, this study, therefore, hypothesised that:

H_9: There is a significant positive relationship between the **firm's age** and the debt ratio.

3.2.10 Firm's Growth

Frank and Goyal (2005) argued that a firm's growth is a major firm-specific factor that can influence a firm's financial choice. The pecking order theory predicts a positive relationship between a firm's growth with its debt ratio, implying that firms with more growth opportunities are more likely to become more leveraged over-time (Frank and Goyal, 2005). According to some recent empirical research, including Amanuel (2011); Solomon (2012); Tornyeva (2013); and Muhammad, Ahmad, Ahmad, Noraini, and Melati (2013), the growth opportunities of a firm are found to have a positive impact on firm leverage. For the purpose of this study, firm growth was measured in terms of the annual

percentage change in total assets. This follows the assumption of some research work, including Solomon (2012) and Muhammad, et al. (2013).

The theoretical and empirical results on the relationship between firm growth and capital structure are contentious. Booth, et al. (2001) argued that a firm's growth opportunities will lead to higher agency costs of debt, which indicates an inverse relationship between the two. As for the agency cost as argued by Myers (1977), it was postulated that financing profitable investments in a growing firm can be controlled by issuing short-term debts that mature before the growth options are exercised. The theoretical assumption is that firms whose assets have a higher proportion of growth use short-term debt. Frank and Goyal (2005) assumed that growing firms are relatively young and thus, have scarce internal funds available to finance their operation opportunities, therefore, they are highly dependent on external debt as postulated by the pecking order theory. Consistent with the pecking order theory that, a growing firm is an indication of an increase in investment opportunities thereby predicting a positive relationship between a firm's growths with its debt ratio. Thus, this study hypothesised that:

H_{10}: There is a significant positive relationship between a **firm's growth** and the debt ratio.

3.3 Variable Measurements

Many different empirical measurements of debt ratio have been used. Some scholars advocate book leverage, whilst some support market leverage. For the purpose of this study, the book option was used based on the argument of Myers (1977), Graham and Harvey (2001), and Olowe (2011). According to Myers (1977), a manager focuses on book

leverage because debt is better supported by assets in place than it is by growth opportunities. Graham and Harvey (2001) were of the opinion that a large number of managers do not rebalance their capital structures in response to equity market movements due to the presence of adjustment costs. Olowe (2011) preferred book leverage because financial markets fluctuate and managers are said to believe that market leverage numbers are unreliable as a guide to corporate financial policies.

In presenting the results, the main focus of the dependent variable was on the book debt ratio (i.e., the ratio of the total debt to the total debt plus total equity). However, the measurement of the independent and control variables are indicated in Table 3.1 as being supported by different scholars cited in the reference column.

The following is the basic equation for the multiple regression models for each firm:

$$TDR_{it}=\beta_0+\beta_1 BS_{it}+\beta_2 BM_{it}+\beta_3 BI_{it}+\beta_4 BHO_{it}+\beta_5 MO_{it}+\beta_6 IO_{it}+\beta_7 B4_{it}+\beta_8 FS_{it}+\beta_9 FA_{it}+\beta_{10} FG_{it}+\beta_{11} GDP_{it}+\beta_{12} BLR_{it}+\beta_{13} INF_{it}+\varepsilon$$

Table 3.3.
Variables definition and measurement

Theories		Variables		Code	Measurement	Reference
Pecking order Trade-off Agency Market timing	**Capital structure**	Debt ratio		TDR	Total debt / Total Debt +Total equity	Ajanthan (2013); Agyei & Owusu (2014); Shafana (2016).
Agency Theory	**Corporate governance mechanisms**	Board Structures	Board size	BS	The number of directors on the firm board.	Ajanthan (2013); Miko & Kamardin (2015a); Shafana (2016)
			Board Meetings	BM	The number of board meetings held in a year.	Saad (2010); Security and Exchange Com. (2011), Sec 12/1; Kajananthan (2012); Shafana (2016).
			Board Independence	BI	Dividing number of independent and non-executive directors by total number of board of directors	Ajanthan (2013) Security and Exchange Commission. (2011). Sec 4/3
Agency Theory		Ownership Structure	Block holder ownership	BHO	Measured by the percentage of the shareholding by block shareholders with 5% minimum of equity ownership	Abobakr & Elgiziry (2016); Le (2015)
			Managerial ownership	MO	Managerial Ownership is measured as the percentage of ordinary shares held by executive directors as shown in the annual report)	Brailsford, et al., (2002); Farouk & Luka 2013; Agyei & Owusu (2014).
			Institutional ownership	IO	Institutional ownership is measured by the percentage of total number of shares held by institutions such as pension funds, mutual funds, insurance companies, corporate firms and banks to total number of shares	Michaely & Vincent (2012); Shehu et al., (2011); Hamze, Bentolhoda & Hamed (2012)

Table 3.3. (Continued)

Theories		Variables	Code	Measurement	Reference
Agency Theory	External mechanisms	Big 4 Audit firm	B4	Dummy variable identified as BIG 4 which is equal to one if the annual report of firm *i's* is attested by the Big 4 auditors (Ernst & Young, Deloitte, KPMG, and Price water house Coopers), and zero otherwise.	Kane & Velury (2002); Adeyemi & Fagbemi (2010); Al-Hiyari, et al. (2016).
Pecking order Trade-off	Firm's Specific Characteristics	Firm size	FS	Logarithm of total assets	Agyei & Owusu (2014); Somathilake & Udaya Kumara (2015); Shafana, (2016).
		Firm age	FA	Number of years since incorporation	Pfaffermayr, Stockl, & Winner (2008); Ezeoha & Botha (2012); Ahmad et al., 2015).
		Firm growth	FG	Percentage change in total assets (At – At-1 / At-1)%	Solomon (2012) Muhammad et al., (2013)
Market timing	Control variables	GDP growth Rate	GDP	Annual rate of GDP growth (in %)	Ahmad et al., (2015)
		Bank Lending Rate	BLR	The average rate of interest charged on loans by commercial banks to private individual and companies (in %)	Booth et al., (2001), Gajurel (2005), Muthama et al., (2013) Buvanendra et al., (2016).
		Inflation Rate	INF	Annual change in consumer price index (in %)	Gajurel (2005); Muthama et al., (2013)

3.4 Techniques of the Data Analysis

This study used the panel multiple regression technique of data analysis in testing and examining the research questions of the study. The correlation matrix was used to identify the relationship between the variables and to also test the existence of a multi-collinearity problem by identifying the correlation coefficient between the variables using the variance inflation factors (VIF). A diagnostic test was also conducted so as to determine the appropriate regressions model that would produce a fair result. This test was considered necessary, especially in a situation where estimates differ widely between the different models.

3.5 Summary

This chapter described the scope of the study and the data collection sources from the secondary data. In order to answer the research questions and achieve the objectives of this study, this chapter has discussed the framework of the study, hypotheses development, measurement of the variables, and the statistical methods that were used to analyse the data.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION OF THE RESULTS

4.0 Introduction of the Empirical Results

This chapter presents the descriptive statistics, correlation matrix, and regression analysis, and an interpretation of the results of the data collected for the study. The chapter begins with the descriptive statistics discussion for the data collected for debt ratio (dependent variable) and the independent variables under subsection 4.1. Then, the correlation matrix for the variables, which is normally used to examine the correlation that exist amongst the variable, is also reported, in subsection 4.2. For a meaningful conclusion to be drawn on the assumptions used in the analysis, various diagnostics tests were conducted and are discussed in subsection 4.3. The regression results for the panel data of the debt ratio are discussed in subsection 4.4. These analyses were used to test the earlier formulated hypotheses to establish the relationship which exists amongst the expressed variables, these was discussed in subsection 4.5. Furthermore, the additional analyses are also reported, in subsection 4.6 and a robust analysis of the other two proxies of the debt ratio (long-term and short-term debts) are discussed in subsection 4.7. The linkage between the findings and the study objectives are discussed in subsection 4.8. The chapter ends with the summary of the major findings of the study.

4.1 Descriptive statistics

The descriptive statistics were used to describe the trend of the variables used in the study. The table disclosed the mean, median, minimum, maximum, standard deviation, skewness, and kurtosis of the dependent and independent variables in the study. The issue of outliers

was solved by winsorising all the continuous variables at the 5% top and bottom before the computation; as suggested by Dixon (1980), the winsorisation of data gives more stable results than trimmed means. According to Tabachnick and Fidell (2007), Pallant (2011), and Griffin and Steinbrecher (2013), outliers can be described as those variables with skewness values above the range of ± 3.3 and kurtosis above the ± 10 range. The results presented in Table 4.1 below, in respect to skewness and kurtosis, indicate that all of the variables were within the acceptable ranges.

Table 4.1
Descriptive analysis for the variables (2012-2016)

	Variable	Mean	Median	Min	Max	Std. deviation	Skewness	Kurtosis
Dependent variable	TDR	0.560	0.554	0.182	0.986	0.222	0.164	2.227
Independent variables	BS	8.685	9.000	5.000	13.000	2.202	0.307	2.300
	BM	4.745	4.000	4.000	7.000	1.029	1.096	2.831
	BI	0.775	0.800	0.550	0.909	0.105	-0.621	2.361
	BHO	59.931	64.000	17.000	88.000	20.107	-0.655	2.576
	MO	18.733	4.710	0.000	76.780	25.112	1.245	3.206
	IO	49.574	55.000	0.000	87.950	27.290	-0.510	2.104
	B4	0.543	1	0	1	0.499	-0.174	1.030
	FA	31.042	32.000	5.000	59.000	16.699	0.071	1.907
	FS_L (In Log)	9.9430	9.9175	8.6234	11.319	0.7299	0.0479	2.254
	FS_N (In Million ₦)	3020	8270	420	208000	50800	2.476	8.531
	FG	7.916	4.577	-20.925	54.280	17.844	0.902	3.704
Control Variables	GDP	3.423	4.200	-1.600	6.200	2.764	-0.906	2.445
	INF	10.700	9.000	8.100	15.700	2.892	0.790	2.031
	BLR	12.400	12.000	11.000	14.000	1.021	0.272	1.956

Note: ***TDR****=Total debt ratio (Total debt / Total Debt +Total equity),* ***BS****= Board size (The number of directors on the firm board),* ***BM****= Board meeting (The number of board meetings held in a year),* ***BI****=Board independence (The proportion of independent and non-executive directors to the total number of board of directors),* ***BHO****=Block holders' ownership (The percentage of the shareholding by block shareholders with 5% minimum of equity ownership),* ***MO****=Managerial ownership (The percentage of ordinary shares held by all directors),* ***IO****=Institutional ownership (The aggregate percentage of shares held by institutions),* ***B4****=Big four audit firm (Dummy variable),* ***FA****=Firm age (Number of years since incorporation),* ***FS_L*** *=Firm size (Logarithm of total assets)* ***FS_N****=Firm size (Total asset book value in million Naira),****FG****=Firm growth (Percentage change in total assets),* ***GDP****=Gross domestic product (Annual rate of GDP growth %),* ***INF****=Inflation (Annual change in consumer price index %),* ***BLR****=Bank lending rate (The average rate of interest charged on loans %).*

Table 4.1 on the descriptive statistics of the dependent and explanatory variables reveals several issues. The table illustrates that, on average, the sample of the listed firms had a high total debt ratio of 56%, which was, however, lower than the mean value of 73.5% reported by Olokoyo (2012). Olokoyo (2012) studied the impact of capital structure on the performance of the quoted firms in Nigeria, and a sample size of 101 non-financial listed firms was used over a five-year period (2003-2007). Using total debt to total assets as a measurement of the total debt ratio, a high mean ratio of 73.5% was recorded. Comparing the 73.5% average debt ratio reported by Olokoyo (2012) for the period of 2003-2007 with the 56% recorded in this study for the period of 2012-2016, it can be concluded that, there was a significant reduction in the availability of debt financing with an increase in equity financing for the Nigerian firms in recent times.

The results reveal that, the average board size of the board of directors of the Nigerian listed firms during the period of the study was 9 members with the largest of 13 members. However, the minimum board size of 5 members indicated that, on average, all of the sample firms had complied with the 2011 SEC code, which requires a minimum of five (5) members on the board of directors (2011 SEC code section 4 sub 1&2). Similarly, on board meetings, the 2011 SEC code mandates the firm's board of directors to arrange and preside over meetings on at least a quarterly basis (2011 SEC code section 12 sub 1&). The above results reveals a mean value of about 5 with a maximum of 7 and minimum of 4 indicating compliance with the provision. The board independence is the proportion of non-executive and independent directors on the board. The provision of the 2011 SEC code is that, the board ought to comprise a mix of executive and non-executive directors, headed by a

chairman, and the majority of the board members should be non-executive directors, and at least one of them should be an independent director (2011 SEC code section 4 (3)). The table shows a mean value of 77.5%, and maximum of 88% non-executive directors, with a minimum of 55%, indicating that all of the sample firms had a majority of their directors being non-executive directors in compliance with the provision.

The table also reveals that the block holders and institutional ownership held a significant proportion of the outstanding equity shares of the Nigerian listed firms in recent years. The results disclosed a mean value of 59.93% and 49.57% for block holders and institutional investors, respectively, and also a maximum value of 88% for block holders and 87.95% for institution ownership. However, it was observed from the firms' annual reports that, block ownership was in the hands of only a few individuals and institutional investors. The mean value of the managerial ownership stood at 18.733% and it ranged from 0% to 76.78%.

The age, size, and growth of the firms were also described in the descriptive analysis in Table 4.1 above. The minimum age recorded was 5 years and the maximum was 59 years, the mean value was around 31 years and the standard deviation was around 17 years. This implies the presence of a moderate variation in the age across the listed non-financial firms in Nigeria. The average of the book value of the total assets represented that the firm size was 3.020 billion naira, and the minimum and maximum values were 420 million naira and 8.270 billion naira, respectively. Moreover, the mean value of the firm's growth was

7.92%, with a standard deviation of 17.84%, maximum growth of 54.28%, and minimum growth of -20.93% also being recorded.

4.2 Correlation Matrix

The correlation matrix explains the degree of correlation that exists amongst variables. Table 4.2 discloses the results of the correlation between the variables used in the study. Pallant (2005) and Pallant (2011) suggested that a high correlation exists between independent variables when the r value is ≥ 0.9, which is an indication of multi-collinearity. All of the independent variables were below the threshold value of 0.90 as suggested by Pallant (2011). However, according to Gujarati (2012) and Studenmund (2014), the best remedy for multi-collinearity is to do nothing, but simply present the results of the fitted model because very often collinearity is essentially a data deficiency problem and, in some cases, the researcher might not have any choice over the data available for the research. On these bases, the results were presented as they were.

Table 4.2

Correlation matrix of dependent and independent variables

	TDR	**BS**	**BM**	**BI**	**BHO**	**MO**	**IO**	B4	FA	FS	FG	GDP	INF	BLR
TDR	1													
BS	-0.111***	1												
BM	-0.134***	0.175***	1											
BI	-0.091**	0.078*	-0.112**	1										
BHO	0.014	-0.061	0.053	0.037	1									
MO	-0.210***	-0.124***	-0.101**	-0.053	0.079	1								
IO	0.010	0.088**	0.138***	0.199***	0.646***	-0.389***	1							
B4	0.066	0.118***	0.230***	0.028	0.193***	-0.209***	0.302***	1						
FA	0.246***	0.022	0.148***	0.030	-0.016	-0.439***	0.164***	0.143***	1					
FS	0.100**	0.417***	0.266***	-0.169***	0.078*	-0.264***	0.298***	0.367***	0.077*	1				
FG	0.122***	-0.012	0.031	0.054	0.157***	-0.036	0.172***	0.125***	-0.042	0.162***	1			
GDP	-0.058	-0.014	-0.092**	-0.021	-0.044	-0.015	-0.005	-0.016	-0.081*	-0.027	-0.001	1		
INF	0.058	0.003	0.057	0.025	0.048	0.011	0.006	0.005	0.062	0.015	0.071	-0.868	1	
BLR	0.041	-0.009	0.090***	0.007	0.039	0.007	0.011	0.022	0.050	0.022	0.073*	-0.470***	0.618***	1

*** (1% sig level), ** (5% sig level), *(10%sig level).

Note: ***TDR****=Total debt ratio (Total debt / Total Debt +Total equity),* ***BS****= Board size (The number of directors on the firm board),* ***BM****= Board meeting (The number of board meetings held in a year),* ***BI****=Board independence (The proportion of independent and non-executive directors to the total number of board of directors),* ***BHO****=Block holders' ownership (The percentage of the shareholding by block shareholders with 5% minimum of equity ownership),* ***MO****=Managerial ownership (The percentage of ordinary shares held by all directors),* ***IO****=Institutional ownership (The aggregate percentage of shares held by institutions),* ***B4****=Big four audit firm (Dummy variable),* ***FA****=Firm age (Number of years since incorporation),* ***FS****=Firm size (Logarithm of total assets) ,* ***FG****=Firm growth (Percentage change in total assets),* ***GDP****=Gross domestic product (Annual rate of GDP growth %),* ***INF****=Inflation (Annual change in consumer price index %),* ***BLR****=Bank lending rate (The average rate of interest charged on loans %).*

It is important to note that, correlation is expressed on a scale from ±0 to ±1. The closer a correlation is to 0, the weaker it is. The closer a correlation is to 1, the stronger it is. According to Viv, Liz, and Jonathan (2003), a correlation value of zero (0) means that there is no linear correlation between the variables, whilst a correlation of one (1) means that the two variables have a perfect linear correlation.

However, correlation is not expected to be greater than 1. Similarly, the positive (+ve) and negative (-ve) signs indicate the direction of movement of the two variables. A positive sign signifies movement towards the same direction whilst a negative sign indicates movement in an opposite direction. Meanwhile, the sign of the correlation does not indicate the strength of the relationship.

For the purpose of this study, the correlation analysis has been presented based on the proxy of the debt ratio, which was the total debt ratio (TDR), and it was correlated jointly with the independent and control variables in the correlation matrix presented in Table 4.2. The board structure variables, managerial ownership, and Big 4 audit firms were not highly correlated amongst each other or amongst the control variables. However, some high correlation existed between block holder ownership and institutional ownership and also amongst the control variables (INF and GDP, BLR and INF).

The correlation between block holder ownership and institutional ownership was 64.59% (positive), which depicted that 64.59% of the block holder ownership was constituted by institutional investors in the sample firms during the period of this study. The correlation between the inflation rate and gross domestic product (GDP) was -86.75%, and the

correlation between the inflation and bank lending rates was 61.77%. To assess the possibility of having a problem of multi-collinearity as a result of the high correlation between the BHO and INF, and also amongst the control variables, the study used variance inflated factors to detect critical multi-collinearity (see Table 4.3). The general rule of thumb commonly used in empirical literature for determining the presence of critical multi-collinearity is VIF≥10 or 1/VIF≤0.1 (see Gujarati, 2004; Hair, Black, Babin, Anderson, & Talham, 2006). The results, as indicated in Table 4.3, disclose that the VIF values were below 10 and the tolerance values were higher than 0.1, so collinearity was not a problem for the analysis of this study.

Table 4.3
VIF and Tolerance value for independent variables

Variable	**VIF**	**1/VIF**
INF	5.35	0.186765
GDP	4.25	0.235035
IO	2.99	0.334323
BHO	2.38	0.421027
MO	1.74	0.574318
FS	1.7	0.589093
BLR	1.69	0.593001
BS	1.31	0.765284
B4	1.27	0.784861
FA	1.24	0.803489
BI	1.2	0.833596
BM	1.19	0.83987
FG	1.08	0.924639
Mean VIF	**2.11**	

Note: *TDR=Total debt ratio, BS= Board size, BM= Board meeting, BI=Board independence, BHO=Block holders' ownership, MO=Managerial ownership, IO=Institutional ownership, B4=Big four audit firm, FA=Firm age, FS=Firm size, FG=Firm growth, GDP=Gross domestic product, INF=Inflation, BLR=Bank lending rate.*

From the correlation matrix presented in Table 4.2, all of the independent variables were below the threshold value of 0.90, which is an indication that critical multi-collinearity was

absent as suggested by Pallant (2011). However, those variables that were highly correlated (BHO & IO, GDP & INF) were regressed separately and reported in the additional analysis. Table 4.2 revealed that all of the board structures and managerial ownership structures, proxied via: Board size, Board meetings, Board independence, and Managerial ownership, were all negatively correlated with the Total debt ratio, whilst Block holders' ownership, Institutional ownership, Big four audit firms, and firm characteristics, proxied via: Firm age, Firm size, and Firm growth, were positively correlated with the Total debt ratio.

The correlation matrix quantifies the relationship between two variables, but ignores which one is dependent and which one is explanatory. The regression model goes beyond the correlation matrix by adding prediction capabilities and provides estimates of the values of the dependent variables from the values of the independent variables. Therefore, the researchers conducted a diagnostic test to determine the appropriate regression model for this study and based its relationship and prediction analysis on the results of the regression model used.

4.3 Diagnostic Test

In order to conduct further investigations and improve the validity of the statistical results, and also determine the best regression model appropriate for this study, the following diagnostic tests were conducted and the summary of the results are presented in Table 4.4.

Table 4.4
Summary of Diagnostic Test result

Testing for random effects

Breusch and Pagan Lagrangian multiplier test for random effects
TDR [Firms,t] = Xb + u[Firms] + e[Firms,t]
Estimated results:

	Var	sd = sqrt(Var)
TDR	0.0491	0.2216
e	0.012	0.1098
u		0.0309
	0.1757	

Test: Var(u) = 0
chibar2(01) = 487.53
Prob > chibar2 = 0.0000

Hausman testing for fixed effect

Test: Ho: difference in coefficients not systematic
chi2 (13) = (b-B)'[(V_b-V)^(-1)](b-B = 22.40
Prob > chi2 = 0.049
(V_b-V_B is not positive definite)

Heterokedasticity Test

Breusch-Pagan / Cook-weisberg test for heteroskedasticity
Ho: Constant variance
Variables: BS BM BI BHO MO MO IO B4 FA FS FG GDP INF BLR
chi2 (13) = 70.73
Prob > chi2 = 0.0000

Homoskedasticity Test

White's test for Ho: homoscedasticity
against Ha: unrestricted heterokedasticity
chi2 (99) = 198.96
Prob > chi2 = 0.0000

Autocorrelation Test

Wooldridge test for autocorrelation in panel data
Ho: no first-order autocorrelation
F(1, 105) = 79.880
Prob > F = 0.0000

Testing for random effects: The Breusch and Pagan Lagrangian multiplier test for random effects was conducted after running the ordinary least squares regression model. The null hypothesis is the random effects whilst the alternate hypothesis is the ordinary least squares (OLS). The results provide a chi-square value of 487.53 and a corresponding probability-value of 0.0000. The result indicates that the null hypothesis could not be rejected since the probability value was less than 0.05. (Baltagi, 2005).

Hausman testing for fixed effects: This test was conducted after running the fixed effect model, so as to select between the random effect and the fixed effect. The test was conducted against the null hypothesis that preferred the random effect, but supported the fixed effect. The Hausman test results provided a chi-square value of 22.40 and a corresponding probability value of 0.049. The results indicate that the null hypothesis could not be rejected since the probability value was less than 0.05 (Baltagi, 2005).

Heteroscedasticity Test: This test was conducted to know if the disturbances appearing in the population regression were homoscedastic and a constant serial correlation through the random individual effects (see Hsiao, 2003; Baltagi, 2005). The presence of heteroscedasticity signifies that it contradicts one of the assumptions of the classical linear regression, which states that the disturbances appearing in the population regression are homoscedastic, implying that the variance of the error term is constant. In the result obtained from the Breuch-Pagan/Cook-Weisber test for heteroscedasticity conducted in this study, the chi-square value was 70.73 and the probability value of 0.0000 was significant. Therefore, the researchers failed to accept the null hypothesis that there was

constant variance, indicating the presence of heteroscedasticity. This signifies that the Ordinary Least Squares Model may not have been appropriate for this study.

Homoscedasticity Test: In order to make further clarification, Cameron and Trivedi's decomposition of the IM-test is also conducted to the test for homoscedasticity. The result obtained shows a chi-square value of 198.96 and probability value of 0.0000. Here, the researchers also failed to accept the null hypothesis of homoscedasticity, but now accept the alternate hypothesis of the presence of unrestricted heteroscedasticity. Therefore, the Ordinary Least Squares Model may not have been appropriate, so the researchers needed a standard error estimate that was robust against the presence of the unrestricted heteroscedasticity as is recommended in Bailey and Katz (2011).

Autocorrelation Test: The Wooldridge test for autocorrelation in panel data was conducted. The null hypothesis was that, there was no first-order autocorrelation. The results show F (1,105) = 79.880 and prob.> F = 0.0000 (significant at 1%). The researchers failed to accept that there was no first-order autocorrelation.

Due to the presence of heteroscedasticity and autocorrelation, the simple OLS, and Random and Fixed Effect models may not have produced accurate estimates where such problems existed. However, Beck and Katz (1995) proposed a panel corrected standard errors (PCSEs) estimator as a way of obtaining better performance on the standard error estimator at no cost of efficiency. The PCSEs estimator is recommended in the following situations;

- The variance of the residuals vary by unit of measurement, but remain constant over time.
- Correlations between the residuals vary across pairs of units, but remain stable over time within each pair and are only existing or occurring in the same period of time (Beck & Katz 1995).
-

According to Hoechle (2007), Stata estimates these variances and correlations from the data and corrects them using the "xtpcse" command. Reed and Webb (2010) confirmed that the PCSEs provide a way of obtaining better performance on the standard error estimation at no cost of efficiency. The argument was also supported by Bailey and Katz (2011) where they argued that, the PCSEs' standard error estimates are robust not only to unit heteroscedasticity, but they are also robust against possible contemporaneous correlation problems. Therefore, the panel corrected standard errors model was adopted for the study. Table 4.5 discloses the summary of the regression model results using the panel corrected standard errors (PCSEs); the details are in the appendix.

4.4 Regression Results

Regression analysis is one of the most important statistical techniques that helps to predict and estimate the strength and direction of the relationship (Studenmund, 2014). The summary of the results are presented in Table 4.5 using the PCSEs model, the details are in the appendix.

Table 4.5
Summary of Regression result for TDR using PCSEs

TDR	Coef.	Std. Err.	z value	P value	Significant
BS	-0.014	0.003516	-3.98	0.000***	-ve sig
BM	-0.04391	0.007785	-5.64	0.000***	-ve sig
BI	-0.13471	0.076822	-1.75	0.080*	-ve sig
BHO	0.001526	0.000399	3.83	0.000***	+ve sig
MO	-0.00178	0.00021	-8.48	0.000***	-ve sig
IO	-0.00174	0.0003	-5.79	0.000***	-ve sig
B4	0.010244	0.010698	0.96	0.338	Not sig
FA	0.00286	0.000225	12.69	0.000***	+ve sig
FS	0.046959	0.007333	6.4	0.000***	+ve sig
FG	0.001492	0.000356	4.19	0.000***	+ve sig
GDP	-0.0059	0.001173	-5.03	0.000***	-ve sig
INF	-0.00233	0.001186	-1.96	0.050**	-ve sig
BLR	0.003847	0.001017	3.78	0.000***	+ve sig
_cons	0.447072	0.089214	5.01	0.000	
Prob > chi2	=	0.0000			
R-squared	=	0.1786			
Wald chil2 (13)	=	2407.1200			

*** (1% sig level), ** (5% sig level), *(10%sig level).

Note: *TDR=Total debt ratio, BS= Board size, BM= Board meeting, BI=Board independence, BHO=Block holders' ownership, MO=Managerial ownership, IO=Institutional ownership, B4=Big four audit firm, FA=Firm age, FS=Firm size FG=Firm growth, GDP=Gross domestic product* (%), *INF=Inflation* (%), *BLR=Bank lending rate* (%).

From the results in Table 4.5, it is interesting to note here that, the coefficients of all the board structure (Board size, Board meetings, and Board independence) and ownership structure variables (Managerial ownership and Institutional ownership) were negative and significantly related to the TDR. The coefficients of the block holder ownership (BHO) were positively and significantly related with the TDR, whilst the Big 4 firms showed a positive but insignificant relationship with the TDR.

From the regression analysis results presented in Table 4.5, the coefficients of the firm-specific characteristics: firm age (FA), firm size, and firm growth (FG), were statistically

significant and positively related to the TDR. Whilst the coefficients of the control variables, GDP and INF, were significant and negatively related to the TDR, but the BLR was significant and positively related to the total debt ratio (TDR).

4.5 Hypotheses Testing

Some hypotheses were developed in chapter three so as to anticipate, assume, predict, project or propose the possible outcome of the results about the relationships between the independent variables of this study and the capital structure (Debt ratio) dependent variables. Individual hypotheses were examined in relation to the findings of this study. The outcomes are summarised and presented in Table 4.6.

Table 4.6
Hypothesis Testing

Hypothesis	Statement	Findings	Conclusion
1	There is a significant negative relationship between board size and the debt ratio	Significant negative	Supported
2	There is a significant negative relationship between board meeting and the debt ratio	Significant negative	Supported
3	There is a significant negative relationship between board independence and the debt ratio	Significant negative	Supported
4	There is a significant negative relationship between block holder ownership and the debt ratio	Significant positive	Not-Supported
5	There is a significant negative relationship between Managerial ownership and the debt ratio	Significant negative	Supported
6	There is a significant negative relationship between Institutional ownership and the debt ratio	Significant negative	Supported
7	There is a significant negative relationship between B4 audit firm and the debt ratio	Insignificant positive	Not-Supported
8	There is a significant positive relationship between firm age and the debt ratio	Significant positive	Supported
9	There is a significant positive relationship between firm size and the debt ratio	Significant positive	Supported
10	There is a significant positive relationship between firm growth and the debt ratio	Significant positive	Supported

The results from Table 4.6 disclosed that there was a significant negative relationship between board size and total debt ratio (TDR). The significant relationship was consistent with the agency theory assumption which postulates that, the principal and agent relationship influences the firm's choice of financing. The negative results obtained, indicate that the sample firms preferred the monitoring control mechanisms to the debt control mechanisms as a useful governance device in reducing agent and principal conflicts of interest. On the other hand, they used the size of the board to influence the managers to

pursue a lower debt. The results are consistent with the pecking order theory that, firms would prefer to use internal sources of financing. The results also support the scholars' arguments that a large board size practice puts pressure on managers so that they adopt lower debt levels, which is consistent with Berger, et al. (1997); Abor (2005); Abor (2007); Hassan and Butt (2009); Heng and Azrbaijani (2012); and Uwuigbe (2013), who found that firms with larger boards tended to employ less debt. Therefore, hypothesis number one (H_1) that predicted a negative relationship between board size and debt ratio was supported.

The findings from the study indicate that there was a significant negative relationship between board meetings and total debt ratio (TDR). Very few studies focus on the impact of board meetings on the firm's capital structure, however, the board meeting is an element of shareholders' activities in controlling and monitoring the firm's operation. The results indicate that, the level of the debt ratio decreased when the board held board meetings frequently. It can be predicted that frequent board meetings could exert strong pressure on managers not to take excessive debts. It is consistent with the agency theory that, managers should be monitored so as to ensure that they act for the best interests of the firm and the shareholders. The results provide support that board meetings could have a negative influence on the firm's capital structure decisions. Saad (2010), Kajananthan (2012), and Shafana (2016) supported this argument. Therefore, hypothesis number two (H_2) that predicted a negative relationship between the board meetings and the debt ratio was supported.

H_3 predicted that there was a significant relationship between the board independence and the total debt ratio. As shown in Table 4.6, the coefficient of the BI showed that there was

a negative significant relationship with the TDR at a 10% level of significance. This indicated a weak significant negative relationship. Meaning that, the percentage of the independent and non-executive directors of the sample firms had a weak influence on the managers to adopt lower debt. The board independence had to do with the principal-agent relationship of the agency theory assumption that, the presence of more outside directors on the board provides active monitoring and influences managers to adopt more debt ratios (Berger, et al., 1997). Nevertheless, the negative relationship obtained from the results was consistent with the pecking order theory that, firms always prefer internal sources of finance. Therefore, hypothesis number three (H_3) that predicted a negative relationship between the board independence and the debt ratio was supported.

Table 4.6 disclosed that, block holder ownership (BHO) had a significant positive relationship with the total debt ratio (TDR). This is contrary to the negative hypothesis that block holders have an incentive to monitor the managers by preferring the monitoring mechanisms rather than the debt mechanisms, thereby reducing the debt financing to protect their investments. The positive significant relationship, recorded, indicated that the block holder ownership in the sample firms used the debt financing mechanisms to check the activities of the managers having one of the mechanisms postulated in the agency theory assumption. This is consistent with the agency theory assumption that, the increase in block holder ownership may influence the agent (managers) to opt for more debt (Nadeem & Sheikh, 2012). The results are consistent with the findings of Berger, et al. (1997)[Brailsford, et al. (2002); Fosberg (2004), and Nadeem and Sheikh (2012), who also found a significant positive relationship. It confirms that firms with higher block holder ownership have higher debt ratios than firms with a dispersed ownership.

Hypothesis number four (H_4) was not supported as a positive relationship was found between the block holder ownership and the debt ratio. That is one of the peculiarities of developing countries where block holder ownership lies in only a few hands and there are weak corporate governance mechanisms and legal systems (Kararti, 2014). Therefore, block holder ownership plays the role of influencing the managers to opt for debt financing to safeguard the interests of the shareholders. Another reason might be the fact that the shareholders generally prefer debt financing because shareholders do not appreciate a dilution of the ownership interests. The positive relationship between the block holder ownership and the debt ratio is consistent with the debt control mechanisms postulated by the agency theory.

As shown in Table 4.6, the study found a significant negative relation between the managerial ownership and the total debt ratio (TDR). This was consistent with the agency theory, which postulates that an increase in managerial ownership aligns the interests of the managers and the equity holders, thereby decreasing the role of debt as a tool to mitigate the agency conflicts. Bathala, et al. (1994); Zou and Xiao (2006); and Nadeem and Sheikh (2012) also found a significant negative relationship between the managerial ownership and the capital structure. They argued that firms with a high level of debt ratio face bankruptcy risks, therefore, equity financing will be more attractive for the managers to maintain their interests and positions. Managers usually act as risk averse; they normally avoid debt. Therefore, hypothesis number five (H_5) that predicted a negative relationship between the managerial ownership and the debt ratio was supported.

The findings from the study indicated that there was a significant negative relationship between the Institutional ownership (IO) and the total debt ratio (TDR). This suggests that firms with high institutional shareholdings, on average, have relatively less total debt ratio. This indicates that an increase in the institutional ownership leads to a decrease in the total debt ratio, which is consistent with the findings of Hussainey and Aljifri (2012). The agency theory postulates that an optimal debt ratio and ownership structure can minimise agency costs (Al-Najjar & Taylor 2008). However, the negative relationship is in consistent with the agency theory assumption and suggests that the firms prefer monitoring control mechanisms to debt control mechanisms. Thus, the results are strongly supportive of hypothesis number six (H_6) that predicted a negative relationship between the institutional ownership and the debt ratio.

The results from Table 4.6 indicate that, the choice of external Big four auditors was statistically insignificant with the firm capital structure. This is contrary to the findings of Al-Najjar and Taylor (2008), Hussainey and Al-Nodel, (2009), and Hassan (2017) who found a positive significant relationship with the total debt ratio. However, it is consistent with Aljifri's (2008) and Hussainey and Aljifri's (2012) studies where they found that there was no significant relationship between engaging Big 4 audit firms or small audit firms with the financial choice. Thus, the external audit choice had no impact on the information asymmetry in Nigeria. And the reason might be that, on average, the firms' board members are more conservative in relation to financial risk as argued by Hussainey and Aljifri (2012). Thus, the choice of external auditor did not have any significant influence on the debt ratio of the sample firms. Therefore, this study did not support the hypothesis that there is a significant negative relationship between the Big 4 audit firms and the debt ratio.

Table 4.6 disclosed that, firm age (FA) had a significant positive relationship with the total debt ratio (TDR). This finding suggested that firms use more debt over time in order to continue operation in the market and increase its capacity. This is consistent with the trade-off and agency theories that postulate a positive relationship between firm age and debt ratio. The assumption is that firms that have been in business overtime have better access to debt financing. This argument was supported by Dewaelheyns and Van Hulle (2010); Ezeoha and Botha (2012); Zare, Farzanfar, and Boroumand (2013); and Chechet and Olayiwola (2014). Therefore, hypothesis number eight (H_8) that predicted a positive relationship between firm age and debt ratio was supported.

Table 4.6 disclosed that, firm size (FS) had a significant positive relationship with the total debt ratio (TDR). This finding suggests that larger firms tend to use more debt whilst smaller ones are more likely to use more equity. This argument was supported by Kurshev and Strebulaev (2015); Hovakimian, et al. (2004); Al-Sakran (2001); and Friend and Lang (1988). They argued that larger firms have better access to debt and they are able to employ more debt financing than smaller firms. Therefore, hypothesis number nine (H_9) that predicted a positive relationship between the firm size and the debt ratio was supported.

H_{10} predicted that there is a significant relationship between the firm growth (FG) and the debt ratio. As shown in Table 4.6, the results indicate a positive significant relationship between the firm growth and the total debt ratio. This is consistence with the pecking order theory that postulates a positive relationship between the firm's growth and its debt ratio; that, firms with more growth opportunities are more likely to become more leveraged overtime (Frank and Goyal, 2005). Other studies, such as Amanuel (2011); Solomon (2012); Tornyeva (2013); Muhammad, et al. (2013); and Daniel, K. A. (2017) also found

a positive significant relationship. Hypothesis number ten (H_{10}) that predicted a positive relationship between the firm growth and the debt ratio was supported.

4.6 Additional Analysis

Table 4.7
Additional analysis: highly correlated variables (IO/BHO and GDP/INF)

			Without IO		Without BHO		Without GDP		Without INF	
TDR	**P value**	**Sig.**	**P value**	**Sig.**	**P value**	**Sig.**	**P value**	**Sig.**	**P value**	**Sig.**
BS	0.000***	-ve sig	0.000***	-ve sig	0.000***	-ve sig	0.000***	-ve sig	0.000***	-ve sig
BM	0.000***	-ve sig	0.000***	-ve sig	0.000***	-ve sig	0.000***	-ve sig	0.000***	-ve sig
BI	0.080*	-ve sig	0.005***	-ve sig	0.022*	-ve sig	0.084*	-ve sig	0.080*	-ve sig
BHO	0.000***	+ve sig	(-) 0.986	Not sig	-------	------	0.000***	+ve sig	0.000***	+ve sig
MO	0.000***	-ve sig	0.000***	-ve sig	0.000***	-ve sig	0.000***	-ve sig	0.000***	-ve sig
IO	0.000***	-ve sig	------	------	0.000***	-ve sig	0.000***	-ve sig	0.000***	-ve sig
B4	(+) 0.338	Not sig	(+) 449	Not sig	(+) 0.202	Not sig	(+) 0.330	Not sig	(+) 0.332	Not sig
FA	0.000***	+ve sig	0.000***	+ve sig	0.000***	+ve sig	0.000***	+ve sig	0.000***	+ve sig
FS	0.000***	+ve sig	0.000***	+ve sig	0.000***	+ve sig	0.000***	+ve sig	0.000***	+ve sig
FG	0.000***	+ve sig	0.000***	+ve sig	0.000***	+ve sig	0.000***	+ve sig	0.000***	+ve sig
GDP	0.000***	-ve sig	0.000***	-ve sig	0.000***	-ve sig	-----	------	0.000***	-ve sig
INF	0.050*	-ve sig	0.080*	-ve sig	0.074*	-ve sig	0.034*	-ve sig	-------	------
BLR	0.000***	+ve sig	0.000***	+ve sig	0.000***	+ve sig	0.599	Not sig	0.105	Not sig
_cons	0.000		0.000		0.000		0.000		0.000	
R- Squared			0.1786		0.1632		0.1704		0.1774	0.1784
Wald chi2 (13)			2407.12		1491.36		1716.88		1769.24	2203.38
Prob > chi2			0.000		0.000		0.000		0.000	0.000

*** (1% sig level), ** (5% sig level), *(10%sig level).

Note: *TDR=Total debt ratio, BS= Board size, BM= Board meeting, BI=Board independence, BHO=Block holders' ownership, MO=Managerial ownership, IO=Institutional ownership, B4=Big four audit firm, FA=Firm age, FS=Firm size FG=Firm growth, GDP=Gross domestic product* (%), *INF=Inflation* (%), *BLR=Bank lending rate* (%).

Table 4.7 disclosed the effects of the highly correlated variables indicated in Table 4.2. The result disclosed in Table 4.7 showed that dropping the institutional ownership (IO) variable from the model changed the results for the board independence (BI) from a 10% negative significant relationship to a 1% negative significant relationship with the debt ratio. Furthermore, the results for the block holder ownership changed from a 1% positive

significant relationship to an insignificant negative relationship with the debt ratio. This indicates the important role of institutional investors in influencing the financial choice of the firm. Due to the diversified portfolio of institutional investors, they have a strong interest in monitoring the activities of the management and the firm's operation (Kararti, 2014). Looking at the result disclosed in Table 4.7, the block holder ownership might not have significant influence on the firm's financial choice if there are only a few institutional investors in the firm's ownership structure holding 5% or more of the firm's outstanding equity.

Table 4.7 also disclosed that dropping the block holder ownership (BHO) variable from the model did not make any significant changes in the results when the block holder ownership was included. The effect on the regression result in each case was very little and negligible and depicted that the results were valid. This was consistent with Gujarati (2012) and Studenmund (2014) who reported that the best remedy for multi-collinearity is to do nothing but simply present the results of the fitted model.

4.7 Robust Analysis

Many scholars have examined the association between the corporate governance mechanisms and the capital structure (Berger, et al., 1997; Wen, et al., 2002; Abor & Biekpe, 2007; Rehman, et al. 2010; Saad, 2010; Hussainey & Aljifri, 2012; Nadeem, & Sheikh, 2012; and Conyon & He, 2014). However, there was no agreement amongst the researchers on the direction of the relationships between the corporate governance mechanisms and the capital structure. Consistent with Bevan and Danblt's (2002) argument, the relationship between corporate governance mechanisms and capital structure

may appear to vary significantly, depending upon the components of the capital structure that have been analysed. Thus, the analysis of the capital structure is incomplete without the detailed investigation into the various forms of the firm's debt (Bevan and Danblt, 2002).

Total debt is the combination of items listed as the non-current and current liabilities' sections of the firm's financial statement. The non-current liabilities refer to the debts with more than a twelve (12) month maturity period and are called long-term debts. Current liabilities, on the other hand, refer to debts due for repayment within twelve (12) months, they are short-term debts. The procedure of accessing each of these forms of debt are significantly different, thus their relationships with the corporate governance mechanisms may appear to vary significantly. The robust analysis of other forms of the firm's debt financing and their relationships with corporate governance mechanisms and firm characteristics have beene discussed in this section so as to provide additional information about the variables used in this study.

Table 4.8 reveals that, out of the mean value of the total debt, 56.03%, the short-term debt was 38.79% whilst the long-term debt was 16.35%, indicating less availability of secure and sustainable long-term loan facilities in the business environment. On the other hand, looking at the total debt and total equity ratio, the results indicate that the proportion of the capital structure of the sample firms were 43.97% equity and 56.03% debt (38.79% short-term debt and about 16.35% long-term debt).

Table 4.8
Descriptive analysis of debt structure

Variable	Mean	Median	Min	Max	Std. deviation	Skewness	Kurtosis
TDR	0.5603	0.554019	0.181779	0.986221	0.221564	0.164384	2.226676
TER	0.4397	0.445982	0.013779	0.818221	0.221564	-0.16438	2.226676
LTDR	0.1635	0.123182	0	0.475937	0.144966	0.82973	2.594024
STDR	0.3879	0.360072	0.081465	0.819785	0.206087	0.509446	2.428361

Note: ***TDR****=Total debt ratio (Total debt / Total Debt +Total equity*), ***TER****=Total equity ratio (Total equity / Total Debt +Total equity*), ***LTDR****=Long-term debt ratio (Total long-term debt / Total Debt +Total equity*), ***STDR****=Short-term debt ratio (Total short-term debt / Total Debt +Total equity*),

These results have revealed that the Nigerian listed firms, during this period of the study, found it difficult to secure long-term loans, therefore, they were dependent on retained earnings and if debt was required, the short-term debt was preferred to the long-term debt. This type of situation indicates that the firms are not fully making use of long-term debts in their capital structures as suggested by the agency theory. A possible reason for this type of situation may be as a result of the various costs associated with debt as postulated by the trade-off theory (De Wet, 2006).

The findings also confirm the argument of Echekoba, and Ananwude (2016) that, Nigerian listed firms in recent times have mostly depended on retained earnings and short-term debts. Another interpretation of the mean value of the capital structure ratio, in this situation from Table 4.8, which was a ratio of 44:39:17 for equity, short-term debt, and long-term debt, respectively, this confirmed the capital structure of the listed firms in Nigeria in recent times. The situation can be associated with the pecking order and trade-off theory which state that there is no well- defined debt ratio; firms prioritise and adapt their financing choice to minimise the associated costs (Singh, Wallace, & Suchard, 2003).

To give a clear understanding of the findings in this work, from the descriptive statistics, there is a need to take a quick look at the descriptive findings of Salawu (2007b) and Olokoyo (2012) related to the capital structure as presented in Table 4.10. It reveals the trend of the capital structure in the Nigerian listed firms.

Table 4.9
Trend of capital structure in Nigeria listed firms

Period	Equity	Total debt	Long term debt	Short term debt	Author
1990-2004	31.17	68.83	8.17	60.66	Salawu (2007b)
2003-2007	26.5	73.5	27.6	45.9	Olokoyo (2012)
2012-2016	43.97	56.03	16.35	38.79	This study

Salawu (2007b) examined an empirical analysis of the capital structure of the selected quoted firms in Nigeria between 1990 and 2004. The analysis was performed on a sample of 50 non-financial firms in Nigeria. Olokoyo (2012) studied the impact of the capital structure on the performance of the quoted firms in Nigeria, and a sample size of 101 non-financial listed firms was used over a five-year period (2003-2007). Based on the results in Table 4.9, one can see a steady reduction in the short-term debt ratio despite it being extremely higher than the long-term debt ratio. This analysis showed that the short-term debt still made up a high percentage of debt financing, meaning that there was still difficulty in accessing long-term debt financing, which is an indication that the Nigerian long-term debt market is relatively under-developed. Thus, most firms have no choice but to rely mainly on short-term debt financing. Another reason for the low level of long-term debt financing is that accessing long-term loans in Nigerian banks is very cumbersome, and are rarely given in most cases because of the poor business environment in Nigeria, which does not allow for a continued survival of business.

For the robust analysis, the debt ratio was viewed from the long-term and short-term debt ratios' perspectives as suggested by Bevan and Danbolt (2002) who said that, analysing the capital structure solely upon one ratio provides only one part of the story. They argued further that, a detailed understanding of capital structure requires the analysis of all of the forms of the firm's debt. The two equations were regressed separately using the panel corrected standard errors (PCSEs) regression model. A comparison was made between the results obtained from the two models and the results from the main proxy used for the debt ratio.

Table 4.10
Summary of Regression result for LTDR using PCSEs

LTDR	Coef.	Std. Err.	z value	P value	Significant
BS	0.004693	0.003367	1.39	0.163	Not sig
BM	-0.03431	0.006325	-5.43	0.000***	-ve sig
BI	-0.02458	0.036492	-0.67	0.501	Not sig
BHO	9.42E-05	0.000199	0.47	0.637	Not sig
MO	8.37E-05	0.000115	0.73	0.468	Not sig
IO	-0.00023	0.000121	-1.94	0.052*	-ve sig
B4	-0.03903	0.011219	-3.48	0.001***	-ve sig
FA	6.53E-05	0.000322	0.2	0.839	Not sig
FS	0.034858	0.005208	6.69	0.000***	+ve sig
FG	-1E-05	0.000392	-0.03	0.979	Not sig
GDP	-0.00192	0.000955	-2.01	0.045**	-ve sig
INF	-0.00296	0.000943	-3.14	0.002***	-ve sig
BLR	0.005235	0.001113	4.7	0.000***	+ve sig
_cons	-0.04499	0.062553	-0.72	0.472	
Prob > chi2	=	0.0000			
R-squared	=	0.0924			
Wald chil2 (13)	=	635.9900			

*** (1% sig level), ** (5% sig level), *(10%sig level).

Note: *LTDR=Long term debt ratio, BS= Board size, BM= Board meeting, BI=Board independence, BHO=Block holders' ownership, MO=Managerial ownership, IO=Institutional ownership, B4=Big four audit firm, FA=Firm age, FS=Firm size FG=Firm growth, GDP=Gross domestic product* (%), *INF=Inflation* (%), *BLR=Bank lending rate* (%).

Table 4.11
Summary of Regression result for STDR using PCSEs

STDR	Coef.	Std. Err.	z value	P value	Significant
BS	-0.0155	0.003351	-4.62	0.000***	-ve sig
BM	-0.00508	0.006219	-0.82	0.414	Not sig
BI	-0.15037	0.059264	-2.54	0.011***	-ve sig
BHO	0.0014	0.000402	3.48	0.001***	+ve sig
MO	-0.00169	0.00016	-10.53	0.000***	-ve sig
IO	-0.00151	0.000301	-5.02	0.000***	-ve sig
B4	0.04021	0.011744	3.42	0.001***	+ve sig
FA	0.002916	0.0003	9.71	0.000***	+ve sig
FS	0.006688	0.007399	0.9	0.366	Not sig
FG	0.001758	0.000424	4.15	0.000***	+ve sig
GDP	-0.00272	0.00136	-2	0.046**	-ve sig
INF	-0.00026	0.001352	-0.19	0.850	Not sig
BLR	0.001438	0.001686	0.85	0.394	Not sig
_cons	0.487239	0.103361	4.71	0.000	
Prob > chi2		=	0.0000		
R-squared		=	0.1852		
Wald chil2 (13)		=	898.7800		

*** (1% sig level), ** (5% sig level), *(10%sig level).

Note: *STDR=Total debt ratio, BS= Board size, BM= Board meeting, BI=Board independence, BHO=Block holders' ownership, MO=Managerial ownership, IO=Institutional ownership, B4=Big four audit firm, FA=Firm age, FS=Firm size FG=Firm growth, GDP=Gross domestic product* (%), *INF=Inflation* (%), *BLR=Bank lending rate* (%).

Table 4.12
Summary Robust Analysis regression results

	TDR	**LTDR**	**STDR**
BS	-ve sig	Not sig	-ve sig
BM	-ve sig	-ve sig	Not sig
BI	-ve sig	Not sig	-ve sig
BHO	+ve sig	Not sig	+ve sig
MO	-ve sig	Not sig	-ve sig
IO	-ve sig	-ve sig	-ve sig
B4	Not sig	-ve sig	+ve sig
FA	+ve sig	Not sig	+ve sig
FS	+ve sig	+ve sig	Not sig
FG	+ve sig	Not sig	+ve sig
GDP	-ve sig	-ve sig	-ve sig
INF	-ve sig	-ve sig	Not sig
BLR	+ve sig	+ve sig	Not sig
_cons			

The results of this robust analysis summarised in Table 4.12 indicates a significant difference between the results for the long term debt ratio and the total debt ratio. However, when considering the difference between the short-term debt ratio and the total debt ratio, the results are not as different as the long term and total debt ratio results. That is an indication of the predominance of short-term debts in the firms' debt structures. Therefore, analyses based solely upon long-term debts may provide different and limited insights into the relationships between the corporate governance mechanisms and the capital structure. From Table 4.12, the results of the long-term debt ratio (LTDR) indicate significant differences from those of the total debt ratio (TDR) relationships. The relationships between the long-term debt ratio (LTDR) and the board size (BS), board independence (BI), block holder ownership (BHO), managerial ownership (MO), firm age (FA), and firm growth (FG) were insignificant, whereas, they all had significant relationships with the total debt ratio (TDR).

Moreover, Big 4 audit firms (B4) showed a negative significant relationship with the LTDR, but an insignificant relationship was recorded with the TDR. The discrepancy recorded in the TDR and LTDR was an indication that with the presence of the Big 4 audit firms, the level of the information asymmetry between the firm and the investors was reduced, hence the investors had confidence in the firm's financial statements and assurance in the future earnings in the stock market. Therefore, the managers of the firms with financial statements audited by any of the Big 4 audit firms might be influenced to opt for lower long-term debts.

From Table 4.12, the results on the short-term debt ratio (STDR) indicates slight differences from that of the total debt ratio (TDR) relationship. The relationship between the short-term debt ratio (STDR) and the board meetings (BM), firm size (FS), Inflation (INF), and bank lending rate (BLR) were insignificant; whereas, they all had significant relationships with the total debt ratio (TDR).

Big 4 audit firms recorded a significant positive relationship with the short-term debt ratio (STDR). This is contrary to a significant negative relationship recorded with the long-term debt ratio (LTDR) and also the insignificant relationship that was recorded with the total debt ratio. This indicates that the choice of Big 4 audit firms as a firm's external auditor might influence the financial choice of the firm. The positive significant relationship recorded between the short-term debt ratio and the Big 4 firms predicted that firms with Big 4 auditors might opt for short-term debt, considering it is cheaper and has easy access. The lenders are more likely to give debts to such firms, thereby making it easier for the firm managers to opt for the short-term debt.

The negative significant relationship recorded between the long-term debt ratio and Big 4 firms predicted that firms using B4 auditors might prefer the monitoring control mechanisms instead of the long-term debt control mechanisms so as to prevent the firm from facing bankruptcy risks. The presence of the Big 4 auditors might influence the firm managers to opt for lower long-term debt.

4.8 Linking the findings with the Study Objectives.

The objectives of this study were clearly enumerated in chapter one sub-section 1.4. Thereafter, the attempt at this level was to link up those objective stated with the findings, so as to assess if those objectives were actually accomplished or the opposite. The first objective of the study was to examine the significant relationships between the board structures (board size, board meetings, and board independence) and the capital structure. Looking at the main analysis as presented in section 4.4 of this chapter, the board structures (board size, board meetings, and board independence) were found to have significant influence on the capital structure of the sample firms. It was found that all other of the board structures proxied for the corporate governance mechanisms had strong negative significant relationships with the total debt ratio (TDR).

The negative relationships depict that, the firms prefer monitoring control mechanisms instead of debt control mechanisms. An increase in board size leads to a reduction in the debt ratio, more frequent board meetings reduce the use of debt, and an increase in the proportion of the non-executive directors in the board can also lead to a reduction in the debt ratio.

The second objective, stated in the earlier part of this study, was to examine the significant relationships between the ownership structures (block holder ownership, managerial ownership, and institutional ownership) and the capital structure. Looking at the main analysis as presented in section 4.4 of this chapter, the ownership structures (block holder ownership, managerial ownership, and institutional ownership) were found to have

reasonable influence on the capital structure of the sample firms. It was found that managerial ownership and institutional ownership as proxies for the ownership structure in the corporate governance mechanism had strong negative significant relationships with the total debt ratio (TDR). Whilst the block holder ownership indicated a positive significant relationship.

The negative relationship depicts that, if there is an increase in the managerial ownership, there will be a reduction in the debt ratio. Similarly, an increase in the institutional ownership might also lead to a reduction in the debt ratio. On the other hand, the positive relationship recorded for the BHO depicts that as a firm increases in the equity share of the block holder ownership, there will be an increase in the debt ratio of the sample firms. The findings disclose that managers may be forced to take more debt when a significant and influential block holder is present.

The third objective, stated in the earlier part of this study, was to examine the significant relationship between the firms' specific characteristics and the capital structure of the listed firms in Nigeria. However, the findings from the panel regressions presented in section 4.4 of this chapter indicate a positive significant relationship between all of the firms' specific characteristics' proxies used in the study: firm age (FA), firm size (FS), and firm growth (FG) with the total debt ratio (TDR). The positive relationship depicts that as a firm increases in age and also increases in the total assets value, there will be an increase in the debt ratio. Furthermore, firm growth could be assumed to be an increase in investment

opportunities that have exceeded the firm's internal funds, thus the debt ratio has also increased.

The fourth objective of the study was to examine the significant relationship between the board structure's choice of external auditors (Big 4) and the capital structure. The insignificant relationship recorded between the Big 4 auditors and the debt ratio depicts that the choice of Big 4 audit firms does not have any significant influence on the choice of the capital structure of the firms.

A closer look at the overall results of the findings disclose that the corporate governance mechanisms influenced the capital structure (Debt ratio) negatively whilst the firms' specific characteristics influenced the capital structure positively. These results depict that, an increase in board size, frequent board meetings, and an increase in the proportion of the non-executive directors on the board had an inverse relationship with the debt ratio. Similarly, an increase in managerial ownership and in institutional ownership also had an inverse relationship with the debt ratio. An increase in the outstanding equity of block holders, on the other hand, had a positive influence on the debt ratio, which is consistent with the debt control mechanisms of the agency theory assumption. The overall assumption from these results was that, the board and ownership structure used the monitoring control mechanisms of the agency theory assumptions to influence the managers to pursue a lower debt.

The influence of firm characteristics, on the other hand, disclosed a positive influence on the firm debt ratio. An increase in firm assets can lead to an increase in the debt ratio, and an increase in firm investment opportunities showing firm growth can lead to an increase in debt ratio. An increase in firm age is an indication that the firm has been in continuous business over time and this give the firm access to easy debt financing. All these are amongst the factors that influence the firms to increase their debt ratios.

4.9 Summary of the Findings

The regression results in Table 4.5 answered all the research questions of this study, where it showed the relationship and the influence of all the features of the corporate governance mechanisms on the debt ratio. It also showed the influence of the firm characteristics variables used in the study on the debt ratio, and similarly, the influence of the external auditor choice on the debt ratio.

Our major findings in this research indicate that corporate governance mechanisms had significant influence on the capital structure decisions of the firms. The board structure (board size, board meetings, and board independence) influenced the capital structure decisions with the use of monitoring control mechanisms to put pressure on the firm managers to opt for lower debts. This is consistence with the monitoring control mechanisms postulated by the agency theory. Similarly, the managerial and institutional ownerships also influenced the firms' financial choices. A negative significant relationship with the debt ratio was recorded in each case, this depicted that the influence of the

managerial and institutional ownerships on the debt ratios followed the monitoring control mechanisms of the agency theory.

The block holder ownership (BHO) also had significant influence on the firms' financial choices, however, the significant positive relationship recorded between block holder ownership and debt ratio depicted that block holders use substitute debt financing control mechanisms to check the activities of the managers, thereby influencing the managers to opt for debt financing. The debt control mechanisms are also consistent with the agency theory assumption, as suggested by Myers (1977) that, the short-term debt could alleviate agency conflicts that exist between the agents and the principals, particularly the underinvestment problem in the firms. Also, an increase in the debt ratio leads to an increase in the firm's financial risk, which could motivate the managers to reduce agency costs so as to maintain the financial ability of the firm to meet its debt and its burden, on time (Harvey, Lins, & Roper, 2004).

The third objective stated in the earlier part of this study was to examine the significant relationship between the firm characteristics and capital structure decisions in the Nigerian listed firms. The direction of the relationship and the level of significance may slightly defer for different proxies of capital structure and the business environment in which the firms are operating, which will continue to produce mixed empirical results, and leave the topic open for continuous research.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

Decisions on firms' capital structures remain the most controversial decision amongst the firms' strategic decision making process, and that is why it is a heated issue in corporate finance. This study, basically, examined the relationship between corporate governance mechanisms, firm characteristics, and capital structure decisions using macroeconomic factors as control variables. The study employed descriptive statistics and econometric analytical tools in studying 106 Nigerian listed non-financial firms with 530 observations for the period of 2012-2016. The analyses were performed using secondary panel data. The study employed total debt ratio as a proxy for capital structure in the main analysis, and two other measurements of debt ratio, which were long-term debt ratio and short-term debt ratio, as proxies for capital structure in the robust analysis. The research came up with the following findings that are of salient importance to scholars, investors, and policy makers who have an interest in investigating issues relating to the capital structure ratio in Nigerian listed firms.

The average total debt to total assets of the Nigerian firms during the period of this study was 56% whilst equity contributed the remaining 44% average. However, about 70% of the total debt was short-term debt (current liability) whilst the remaining 30% was long-term debt. (Non-current liability).The relationships between corporate governance mechanisms, featuring board and ownership structure, and capital structure were significant negative relationships, whilst the relationship between firm characteristics (firm

age, firm size, and firm growth) and capital structure were significant positive relationships. However, the strength of the relationships slightly differed with each of the proxies for capital structure (Total debt ratio, long-term debt ratio, and short-term debt ratio). Macroeconomic variables also had some significant relationships with capital structure and this may account for the short-term debt financing nature of the Nigerian Firms.

5.2 Recapitulation of the Study's key Findings

The key findings of this study were highlighted from two perspectives. Firstly, the result from the descriptive statistics with respect to all the proxies used to measure the debt ratio, corporate governance mechanisms, and firm characteristics. Secondly, the result from the panel regression with respect to the corporate governance mechanisms and firm characteristics relationship with debt ratio, and the robust analysis of the relationship with other forms of the firm's debt financing, which has not been extensively explored in the Nigerian context. The study showed very fascinating results in terms of the capital structure of the non-financial listed firms in Nigeria. For the fact that the study was conducted after the implementation of the Corporate Governance Code 2011 issued by the security and exchange commission (SEC) in Nigeria. The inverse relationship recorded between the corporate governance mechanisms (board and ownership structure) and the total debt ratio was an indication that, effective implementation of the Corporate Governance Code 2011 is a good strategy targeted at using more equity to keep the Nigerian firms relevant in the capital market, improve their market performance, and yield growth opportunities.

However, firms with more block holder ownership may not prefer equity financing as the result indicated a significant positive relationship between block holder ownership and debt ratio (total debt and short-term debt). Furthermore, the relationship between Big 4 audit firm and total debt ratio was insignificant from the result of the main analysis presented. However, the result in the robust analysis disclosed a negative relationship between Big 4 audit firm and long term debt (LTDR), while positive relationship was recoded with short term debt (STDR). This is an indication that the relationship between Big 4 audit firm and debt ratio depend on debt financing policy adopted by the firm. The study provided evidences that besides firm characteristics, corporate governance mechanisms has significant influence on the firm capital structure.

5.3 Contribution of the Study

The capital structure decision is an important concept for the academicians and the practitioners and that is why it is a heated issue in corporate finance. To the best of the researcher's knowledge few studies have combined the corporate governance mechanisms as well as firm-specific characteristics to measure their influence on the capital structure in the Nigerian listed non-financial firms as a whole. This study extended our knowledge of corporate governance mechanisms and their influence on the capital structure of the non-financial listed firms in Nigeria. Adequate and comprehensive data for five years (2012–2016) for all non-financial listed firms were used for the analysis in this study. This study is expected to be an important empirical contribution in the area of corporate governance.

The first objective of the study was to examine the relationship between board structure (board size, board meetings, and board independence) and the capital structure of the listed

firms in Nigeria. The main finding revealed that board structure had a significant negative relationship with the capital structure decisions of the sample firms. The second objective was to examine the relationship between the ownership structure (block holder ownership, managerial ownership, and institution ownership) and the capital structure of the listed firms in Nigeria. The main finding revealed that managerial ownership and institutional ownership had significant negative relationships with the capital structure decisions of the sample firms whilst the relationship with block holder ownership was significant and positive.

The third objective of the study was to examine the relationship between the firm characteristics (firm size, firm age, and firm growth) and the capital structure of the listed firms in Nigeria. The main finding revealed that the firm characteristics had a significant positive relationship with the capital structure decisions of the sample firms. Whilst the fourth objective was to examine the relationship between the external auditor (Big 4 audit firms) and the capital structure of the listed firms in Nigeria. The main finding revealed that the external auditor choice had no significant relationship with the capital structure decisions of the sample firms.

The study contributes to literature by looking at the strategic decisions regarding capital structure decisions by arguing the influence of corporate governance mechanisms on capital structure decisions. The practical contribution is that the corporate governance practices by the firms have significant influence on the capital structures of the firms,

therefore, they must be considers a lot when making corporate governance policies for the firms.

The study contributes to the literature by arguing the influence of board meetings and board independence on firm debt ratio. Most empirical studies conducted on the influence of corporate governance mechanisms on debt ratio were conducted in developed countries, but a paucity of studies used board meetings and board independence as corporate governance proxies as evidence from developing countries. The study has argued that the board meetings and board independence influence the debt ratio, contributes to the agency theory's monitoring control mechanisms assumption. That is, that an increase in frequency of board meetings and increase in the proportion of outside directors might put pressure on the firm's management to opt for lower debt.

The study also contributes to literature by explaining the influence of ownership structure on capital structure. The study has argued that managerial and institutional ownership influence capital structure negatively whilst block holder ownership influences capital structure positively, therefore, it must be considered whilst issuing equity shares for the firm. The study has also argued that, for better access to financing, less cost of capital, better consideration for all the firm's stakeholders, and better firm performance, the corporate governance policy of the firm must be considered. The study also explained the influence of firm characteristics on the firm debt ratio, as it was learned from previous studies and is consistent with the capital structure theories.

Furthermore, the methodological contribution of this study could be viewed from the perspective of using the panel data methodology and, particularly, employing the panel-corrected standard errors (PCSEs) regression model on data with the presence of unrestricted heteroskedasticity, and first-order autocorrelation after performing the robust test.

This study could also be considered as an addition to knowledge and to the series of studies and existing literature conducted in the Nigerian context and, globally, in the area of corporate governance and corporate finance. It is expected to add substance to the dearth of literature as the study elucidated the influence of the corporate governance mechanisms as well as firm characteristics on the financial structure of the Nigeria firms.

5.4 Conclusion

The result of this empirical research has revealed that some features of the corporate governance mechanism and firm-specific characteristics are very relevant for explaining the capital structure of firms in Nigeria similar to firms in developed countries. This suggests that some of the insights from modern capital structure theories are portable to the Nigerian business environment. Overall, the empirical results from this study offer some support for monitoring the mechanism assumption of the agency theory as board structure, managerial ownership, and institution ownership disclosed inverse relationships with debt ratio. Whilst, on the other hand, block holder ownership offers support for the debt control mechanisms of the agency theory as block holder ownership disclosed a positive relationship with debt ratio.

The pecking order theory postulates the need for debt finance first, before opting for equity financing whenever an internal source is not sufficient for firm operation. The significant positive relationships between firm size, firm growth, and firm age with debt ratio disclosed in the study go with the pecking order assumption that older and bigger firms, with investment growth opportunities, use more of debt financing than equity financing. Increases in firm assets might demand additional finance above the internal source, therefore, calling for debt financing as the next alternative. Firm growth is an indication of an increase in investment opportunities which might also call for additional finance, more than the retained earnings of the firm; the result would be the debt financing option.

The trade-off theory explains that the selection of the firm's capital structure is the outcome of the trade-off between the cost of debt and its benefit. The theory postulates that firms that have been in business for a longer period have better access to debt financing and the cost of the debt is less for older firms. The significant positive relationship between firm age and debt ratio disclosed in the study offers support for this trade-off assumption. A remarkable difference between the capital structures in Nigerian firms and firms in developed countries (example, the United States, Switzerland, etc.) was that Nigeria firms presumably prefer short-term debt financing with a substantially lower ratio of long-term debt. The implication is that Nigerian firms rely heavily on the short-term debt financing choice rather than the long-term debt finance and this, to an extent, might limit the explanatory power of the capital structure theories in Nigeria.

5.5 Recommendations

The results of this study are strongly supportive of the agency theory that postulates monitoring control mechanisms in the relationships amongst the corporate governance mechanisms and capital structure decisions. Board structure, managerial ownership, and institution ownership most strongly influence capital structure through their monitoring control mechanisms. In line with the findings of this study, the authors make the following recommendations:

For the firm's management to decide on the appropriate mix of debt and equity that will ensure the firm continues as an ongoing concern, the corporate governance policy issues of the firm should be of great concern to the firm's management.

Nigeria as a developing country aims to attract more foreign investors, better access of Nigerian firms to financing, less cost of capital, better consideration for all of the firms' stakeholders and better firm performance to enhance the country's economic growth and development. Sound and effective corporate governance practices must be put in place across all the firms in the Nigerian capital market. Nigerian firms rely on a short-term debt financing choice which forms the major part of their debt ratio. The establishment of an independent director system and an increase in the proportion of non-executive directors in the board enhance monitoring control mechanisms thereby reducing the use of debt as control mechanisms. This, in turn, will reduce bankruptcy and the financial distress associated with short-term debt, and focus more on developing internal strategies that can help improve more on maximising shareholders' wealth.

The implementation of the corporate governance code 2011 issued by the security and exchange commission of Nigeria should be made mandatory across all the firms, not only the capital market participants and include punishment for firms that break the regulation. The findings show that firms in Nigeria do not use much of a long-term debt in their respective capital structure choices. This may be due to the generally poor participation of both public and private sectors in the bond market and other macroeconomic factors. The Nigerian Stock Exchange and Central Bank of Nigeria should, therefore, strive to remove any rigid policies which could hinder the effective participation of the firms in the capital market. Economic policies that could help further develop the capital market in such a way that it can absorb any increase in demand for funds should be formulated.

The finding of this study is clearly of benefit to the regulators and the investors. For the regulators, the result can be used to evaluate the current corporate governance policy across the firms and make the appropriate amendments where necessary. As for the investors, they can use the result of the study in the composition of the board structure and issuing of equity shares so as to enhance the internal corporate governance quality that can safeguard their investments effectively.

5.6 Limitations of the Study

The study only covered data of 106 active non-financial listed firms in the Nigerian stock exchange market, which is the most considerable and preferable index for lenders and investors in the Nigerian capital market. The study excluded firms in the financial institution sector due to the nature of services rendered by the financial institutions which

are quite different from the other sectors. Also the study did not represent any unlisted firms; the study only focused on firms listed on the Nigerian stock exchange market, and the findings may not be generalisable on all firms in Nigeria. Further studies could consider the small and medium enterprises (SMEs) in Nigeria.

This research work only focused on the issues raised in the research questions. Firstly, the issue of whether a significant relationship exists between board structures (board size, board meetings, and board independence) and the capital structure of the listed firms in Nigeria. Secondly, was to find out if any significant relationship exists between ownership structures (block holder ownership, managerial ownership, and institutional ownership) and the capital structure of the listed firms in Nigeria. Thirdly, was whether a significant relationship exists between the firms' specific characteristics (firm size, firm age, and firm growth) and the capital structure of the listed firms in Nigeria? Lastly, was whether a significant relationship exists between external auditor choice (Big 4 audit firm) and the capital structure of the listed firms in Nigeria?

References

Abbott, L. J., & S. Parker, (2000). Auditor selection and audit committee characteristics. *Auditing, 19*(2), 47-66.

Abbott, L. J., Parker, S., Peters, G. F., & Raghunandan, K., (2003). The association between audit committee characteristics and audit fees. *Auditing, 22*(2), 17-32.

Abdoli, M. Lashkary. M. Dehghani M. (2012). Corporate governance and its effect on the corporate financial leverage. *Journal of Basic and Applied Scientific Research, 2*(9), 8552-8560.

Abiodun, B. Y. (2014) Theoretical review of determinants of financial structure of firms in Nigeria *Handbook on the Emerging Trends in Scientific Research,* 202-206.

Abobakr, M. G., & Elgiziry, K., (2016). The effect of board characteristics and ownership structure on the corporate financial leverage. *Accounting and Finance Research, 5*(1).

Abor, J. (2005). The Effect of Capital Structure on Profitability. An Empirical Analysis of listed firms in Ghana. *The Journal of Risk Finance Incorporating Balance Sheet .6(*5), 10.

Abor, J. (2007). Corporate Governance and Financing Decisions of Ghanaian listed firms, corporate governance. *International Journal of Business in Society*, 7(1), 83-92.

Abor J. (2008). Determinants of the capital structure of Ghanaian firms, African. *Journal of Business Finance and Accounting, 25*(1), 1–27.

Abor, J. & Biekpe, N. (2005). What determines the capital structure of listed firms in Ghana? *The African Finance Journal,* 7(1), 37-48.

Abor, J. & Biekpe, N. (2006). Does corporate governance affect the capital structure decision of Ghanaian SMEs? *Corporate Ownership & Control, 1,* 113-118.

Abor, J. & Biekpe, N. (2007). Corporate governance, ownership structure and performance of SMES in Ghana: Implications for financing opportunities. *Corporate Governance, 7*(3), 288-300.

Abzari, M., Fathi. S, & Nematizadeh, F. (2012). Analyzing the impact of financial managers' perception of macroeconomic variables on capital structure of firms listed in Tehran Stock Exchange. *International Journal of Academic Research in Economics and Management Sciences, 1*(3), 131-141

Adesola W. A. (2009) Testing Static Trade off Theory against Pecking Order Models of Capital Structure in Nigerian quoted firms. *Global Journal of Social Sciences, 8*(1), 61-76.

Adeyemi, S. B., & Fagbemi, T. O. (2010). Audit quality, corporate governance and firm characteristics in Nigeria. *International Journal of Business Management, 5*(5), 169-179.

Adams, R., & H. Mehran. (2002). Board Structure and Banking Firm Performance. *Unpublished paper, Federal Reserve Bank of New York.*

Afolabi, A. A. (2015). Examining corporate governance practices in Nigerian and South African firms. *European Journal of Accounting, Auditing, and Finance Research, 3*(2), 10–29.

Agyei, A., & Owusu, A. R. (2014). The effect of ownership structure and corporate governance on capital structure of Ghanaian listed manufacturing companies. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 4,* 109-118.

Ahmad, N., & Aris, Y. B. W. (2015) Does Age of the determine capital structure decision? Evidence from Malaysia trading and service sector. *International Business Management, 9*(3), 200-207.

Ahmadpour, A., Jafari, A., & Golmohammadi, H. (2012). Corporate Governance and Capital Structure: Evidence from Tehran Stock Exchange. *Midle-East Journal of Scientific Research, 11*(4), 535.

Ajanthan. (2013). Impact of corporate governance practices on firm capital structure and profitability: A study of selected hotels and restaurant companies in Sri Lanka. *Research Journal of Finance and Accounting, 4,* 115-126.

Ajao O. S. & Ema I. U. (2013). Determinants of Capital Structure in Nigerian Firms: *A Theoretical Review. 2, Babcock University, Nigeria.*

Al-Hiyari, A., Latif, R. A., & Amran, N. A. (2016). Do big 4 auditors improve the ability of goodwill to forecast future cash flows? The Malaysian evidence. *Corporate Ownership & Control, 13*(3), 164-178.

Aljifri, K. (2008). Annual reports disclosure in a developing country: the case of UAE. *Advances in Accounting, 24*(1), 93-100.

Al-Najjar, B. & Taylor, P. (2008). The relationship between capital structure and ownership structure. *Managerial Finance, 34*(12), 919-933.

Al-Najjar, B. & Hussainey, K. (2011). Revisiting the capital structure puzzle: UK evidence. *Journal of Risk Finance, 12*(4), 329-38.

Al-Sakran, S. A. (2001). Leverage determinants in the absence of corporate tax system: the case of non -financial publicly traded corporations in Saudi Arabia. *Electronic Version, 27,* 58-86.

Amanuel, M. (2011). The determinants of capital structure: evidence from manufacturing share companies of Addis Ababa city. *Master's thesis, Addis Ababa University.*

Amos, O. A & Jeremiah, O. I (2013). Capital structure and profitability of quoted companies in Nigeria. *International Journal of Business and Social Research (IJBSR), 3*(3), 99-106

Anderson, R., Mansi, S., & Reeb, D. (2004). Board Characteristics, Accounting Report Integrity and the Cost of Debt. *Journal of Accounting and Economics, 37*, 315-342.

Anila Çekrezi (2013). Analyzing the Impact of Firm's Specific Factors and Macroeconomic Factors on Capital Structure: A Case of Small Non-Listed Firms in Albania. *Research Journal of Finance and Accounting 4*(8), 90-95.

Antoniou, A., Guney, Y., & Paudyal, K. (2008). The Determinants of Capital Structure: *Capital Market Oriented*

Armour, J, Deakin, S & Konzelman, S. J. (2003). Shareholder Primacy and the Trajectory of UK corporate governance. *British Journal of Industrial Relations, 41*(3), 531-555.

Arowolo, R. O. & Che-Ahmad A. (2016). Effect of Horizontal-Agency-Costs and Managerial Ownership on Monitoring Mechanisms**.** *International Journal of Economics and Financial Issues, 6*(S7), 186-191.

Awan, A., & Amin, S., (2014). Determinants of capital structure. *European Journal of Accounting Auditing and Finance Research, 2*(9), 22-41.

Awan T. N., Rashid M., & Zia-ur-Rehman, M. (2011). Analysis of the Determinants of Capital Structure in Sugar and Allied Industry. *International Journal of Business and Social Science, 2*(1), 221-229.

Axelson, U. Jenknson, T. Stromberg, P. & Weisbach M. S (2013). Borrow cheap, Buy High? The determinant of leverages and pricing buyouts. *The Journal of Finance, 68*(1), 2223-2267.

Bailey, D., & Katz, J. N (2011). Implementing Panel-Corrected Standard Errors in R: The pcse Package. *Journal of Statistical Software, Code Snippets 42*(1), 1-11

Baker, M., & Wurgler, J. (2002), Market timing and capital structure. *Journal of Finance, 57*(1), 1-32.

Baltagi, B. H., Byoung, C. J, & Seuck, H. S., (2010). Testing for Heteroskedasticity and serial correlation in a random effects panel data model *Journal of Econometrics.*

Baltagi, B. H. (2005) Econometric Analysis of Panel Data. (Third Edition) *John Wiley & Sons, Ltd*

Bancel, F., Mittoo, U. R. (2004). Cross-country determinants of capital structure choice: A survey of European firms. *Financial Management, 33*(4), 103-132.

Barclay, M., & Smith C. Jr. (1996). On financial architecture: leverage, maturity, and priority. *Journal of Applied Corporate Finance, 8*(4), 4-17.

Barry, C. B., Mann, S. C. Mihov, V. T., & Rodriguez, M. (2008). Corporate debt issuance and the historical level of Interest rates. *Financial Management, 37*(3), 413-430.

Barton, S. L., Ned, C. H. & Sundaram, S. (1989). An empirical test of stakeholder theory predictions of capital. *Financial Management, 18*(1), 36-44.

Bathala, C. T., Moon, K. P., & Rao R. P., (1994). Managerial ownership, debt policy, and the impact of institutional holdings: An agency perspective. *Financial Management, 23*, 8-50

Baulkaran, V. (2014). A quiet revolution in corporate governance: An examination of voluntary best practice in governance policies. *International Review of Finance, 14*(3), 459–483.

Beck, N., & Katz, J., N. (1995). What to do (and not to do) with time-series cross-sectional data. *America political science review, 89* (3), 634-637.

Berger, P. G., Ofek, E. & Yermack, D. L. (1997). Managerial entrenchment and capital structure decisions. *The Journal of Finance, 52*(4), 1411-1438.

Berger, A & E. B. Dipatti. (2003).Capital Structure and Firm Performance: A New Approach to Testing Agency Theory and an Application to the Banking Industry. (January 2003). FEDS *Working Paper No. 2002-54.*

Berle, A. & Means, G. (1932). The Modern Corporation and Private Property. *Mc-Millan, New York.*

Bevan, A. A. & Danbolt, J. (2002) Capital structure and its determinants in the United Kingdom – a decompositional analysis. *Applied Financial Economics, 12*(3), 159-170.

Bhagat, S., & Bolton, B., (2008). Corporate governance and firm performance. *Journal of Corporate Finance, 14*, 257–273.

Bhagat, S., & Bolton, B. (2013). Director ownership, governance, and performance. *Journal of Financial and Quantitative Analysis*, *48*(1), 105-135.

Bharath, S. T. Pasquariello, P. & Wu, G. (2009) Does Asymmetric Information Drive Capital Structure. *The Review of Financial Studies, 22*(8), 3211-3243.

Bodaghi A. & Ahmadpour A. (2010). The effect of corporate governance and ownership structure on capital structure of Iranian listed companies. *7th International Conference on Enterprise Systems, Accounting and Logistics.*

Bokpin, G., A. (2009). Macroeconomic development and capital structure decisions of firms. *Studies in Economics and Finance, 26*(2), 129-142.

Bokpin, G. A., & Arko, A. C. (2009). Ownership structure, corporate governance and capital structure decisions of firms: Empirical evidence from Ghana. *Studies in Economics and Finance, 26*(4), 246-256.

Bolton, P. Becht, M. Roell, A. (2005). Corporate Law and Governance. *Handbook of law and Economic.*

Bolton, P. (2016). Debt and money: Financial constraints and sovereign finance, *Journal of Finance, 71*(4), 1483-1510.

Booth, L., Aivazian, V., Demirguc– Kunt, A., & Maksimovic, V. (2001). Capital structure in developing countries. *Journal of Finance, 571*(1), 87-130.

Bos T. & Fetherson (1993) Capital structure practices on the Pacific Rim. *Research on International Business and Finance, 10*, 53-66.

Bougatef, K., & Chichti, J. (2010). Equity market timing and capital structure: Evidence from Tunisia and France. *International Journal of Business and Management, 5*(10), 167-177.

Brailsford, T. J., Oliver, B. R., & Pua, S. L. H. (2002). On the relation between ownership structure and capital structure. *Accounting and Finance, 42*(1), 1-26.

Brealey R. A., & Myers C. S (1991). Principles of corporate finance. *New York McGraw-Hill*

Brigham, E. F., & Daves P. R., (2004). International financial management. *8th edition Thomson south-western*

Buvanendra, S., Sridharan, P. & Thiyagarajan S. (2016). Role of Country-specific Factors on Capital Structure Decision—Evidence from Sri Lankan Listed Firms. *Global Business Review, 17*(3), 582-593.

Buvanendra, S., Sridharan, P. & Thiyagarajan, S., (2017). Firm characteristics, corporate governance and capital structure adjustments: A comparative study of listed firms in Sri Lanka and India. *IMB Management Review, 20,* 1-14

Cadbury, S. A. (2002). Corporate Governance and Chairmanship- A Personal View. *Oxford: Oxford University Press*. Page 1-5

Carmen, C., Joseph, F. & Benjamin A. A. (2011). Testing trade-off and pecking order models of capital structure: does legal system matter? *Managerial Finance, 37*(8), 715-735.

Cassar, G. & Holmes. S. (2003). Capital structure and financing of SMEs: Australian evidence. *Journal of Accounting and Finance, 43*, 123-147.

Çekrezi, A. (2013) Analyzing the ımpact of firm's specific factors and macroeconomic factors on capital structure: A case of small non- listed firms in Albania. *Research Journal of Finance and Accounting, 4*(8), 90-95

Cespedes J, Gonzales M, & Molina C. (2008). Ownership concentration and the determinants of capital structure in Latin America.

Chadegani, A. A., Nadem, M., Noroozi, M., & Madine, S., M. (2011). The Effect of Economic and Accounting Variables on Capital Structure: Empirical Evidence from

Iranian Companies. *International Research Journal of Finance and Economics, 71*, 105-111.

Chaganti, R. & Damanpour, F. (1991) Institutional ownership, capital structure, and firm performance. *Strategic Management Journal*, *12*(7), 479-491

Chang X., Dasgupta S., & Hilary G. (2009). The effect of auditor quality on financing decisions. *The Accounting Review American Accounting Association, 84*(4), 1085-1117.

Chechet I. L., & Olayiwola A. B. (2014). Capital structure and profitability of Nigerian quoted firms: The agency cost theory perspective. *American International Journal of Social Science, 3*(1), 139-158.

Chen, H. (2010). Macroeconomic conditions and the puzzles of credit spreads and capital structure. *The Journal of Finance, 65*(1), 2171-2212.

Chidambaran, N & John, K., (2000). Managerial compensation, voluntary disclosure, and large shareholder monitoring. *Working paper, New York University.*

Chidambaran, N. K. & John, K. (2010). Managerial Horizon, Voluntary Disclosure and Firm Risk. Available at http://www. bnet.fordham.edu/ chidambaran/G_ Horizon_ 2010. pdf,

Choe, H., Masulis, W. R. & Nanda, V. (1993). Common stock offerings across the business cycle; Theory and evidence. *Journal of Empirical Finance, 1*(1), 3-31.

Claessens, S., Djankov, S., Fan, J. P. H., & Lang, L. H. P. (2002). Disentangling the incentive and entrenchment effects of large shareholders. *The Journal of Finan*ce, 57(6), 2741-2771.

Coles, J., Daniel, N., & Naveen, L. (2008). Boards: Does one size fit all? *Journal of Financial Economics 87*, 329-356.

Conyon, M. J., & He, L. (2014). Executive compensation and corporate fraud in China. *Journal of Business Ethics, 134*, 669-691.

Craig, V. V. (2005). The changing corporate governance environment: Implications for the Banking Industry. *FDIC Banking Review*, 1-15

Crutchley, C., Jensen, M., Jahera, J. & Raymond, J. (1999). Agency problem and the simultaneity of financial decision making: The role of institutional ownership. *International Review of Financial Analysis, 8*, 177-197.

Daniel, K. A. (2017). The joint effect of firm growth, macroeconomic factors and capital structure on the value of non-financial firms listed on the Nairobi Securities Exchange. *International Journal of Economics, Commerce and Management, 7*(9), 618-628

Damak, S. T. (2013). The corporate governance mechanisms: evidence from Tunisia Banks. *Journal of Business and Management, 9*(6), 61-68

Dammon, R. M., & Senbet. L, W. (1988). The effects of taxes and depreciation on corporate investment and financial leverage. *Journal of Finance, 43*(2), 357-373.

Danso, A., & Adomako, S. (2014). The financing behaviour of firms and financial crisis. *Managerial Finance, 40*(12), 1159-1174.

Daskalakis, N., Psillaki, M., (2008), Do Country Or Firm Factors Explain Capital Structure? Evidence from SMES in France and Greece. *International Journal of Economics and Financial Issues, 1*(1), 1-11

Daskalakis, N. & Psillaki, M. (2008). Do country of firm factor explain capital structure? Evidence from SMEs in France and Greece. *Applied financial economic journal 18,* 87-97.

David, D. F., & Olorunfemi, S. (2010). Capital structure and corporate performance in Nigeria petroleum industry: Panel data analysis. *Journal of mathematics and statistics 6*(2), 168-173.

DeAngelo, H. & Masulis, W.R. (1980). Optimal Corporate and Personal Taxation. *Journal of Financial Economics, 8*(1), 3-27.

DeAngelo, H. & Roll, R. (2015). How stable are corporate capital structures? *Journal of Finance, 70*(1), 373-418.

Deesomsak, R., Paudyal, K., Pesce, G. (2004). The determinants of capital structure: Evidence from the Asia Pacific region. *Journal of Multinational Financial Management, 14*(4-5), 387-405.

De Wet J.H (2006). Determining the optimal capital structure: a practical contemporary approach. *Meditari Accountancy Research, 14*(2), 1-16.

Dewaelheyns, N., & Van Hulle, C., (2010). Internal capital markets and capital structure: Bank versus internal debt. *European financial management, 16*(3), 345-373.

Dincergok, B., & Yalciner, K. (2011). Capital structure decisions of manufacturing firms' in developing countries, *Middle Eastern finance and economics, 12*, 86-100.

Dixon, W. J. (1980). Efficient analysis of experimental observations. *Annual Review of Pharmacology and Toxicology, 20,* 441-462

Donaldson, C. (1961). Corporate debt capacity: A study of corporate debt policy and the determinants of corporate debt capacity. *Boston, Division of research, Harvard University.*

Driffield, Mahambare, V. & Pal, S. (2006). How does ownership structure affect capital structure and firm performance? https://www.researchgate.net/publication/4998728

Driffield, Mahambare, V. & Pal, S. (2007). How does ownership structure affect capital structure and firm value? *Economics of transition, 15*(3), 535-537.

Du, J. & Dai, Y. (2005). Ultimate corporate ownership structures and capital structures: Evidence from East Asian economies, *Corporate Governance: An International Journal, 13*(1), 60-71.

Eboh, D. C. (2004). The Influence of Capital structure theories on corporate financing choice in Nigeria. *(Unpublished MSc thesis)*

Echekoba F. N. & Ananwude A. C. (2016). The Influence of Financial Structure on Profitability with Special Reference to Oil and Gas Firms in Nigeria. *Advances in Research, 7*(1), 1-17

Ejuvbekpokpo, S. A., & Esuike, B. U. (2013). Corporate governance issues and its implementation: The Nigerian experience. *Journal of Research in International Business and Management, 3*(2), 53–57.

El-Faitouri, R. (2014). Board of directors and Tobin's Q: Evidence from UK firms. *Journal of Finance and Accounting, 2*(4), 82-99.

Elliott, W. B., Koëter-Kant, J., & Warr, R. S. (2007). A valuation-based test of market timing. *Journal of Corporate Finance, 13*(1), 112-128.

Elliott, W. B., Koëter-Kant, J., & Warr, R. S. (2008). Market timing and the debt-equity choice. *Journal of Financial Intermediation, 17*(2), 175-197.

Esperanca, J. P., Ana, P. M. G., & Mohamed. A. G. (2003). Corporate debt policy of small firms: *Journal of Small Business and Enterprise Development, 10*(1), 62-80.

Ezeoha, A.E & Okafor, F.O. (2009). Local corporate ownership and capital structure decisions in Nigeria: a developing country perspective. *Emerald group publishing, 10*(3), 249-260.

Ezeoha A. & Botha F. (2012). Firm age, collateral value, and access to debt financing in an emerging economy: evidence from South Africa. *The South African Journal of Economic and Management Sciences, 15*(1), 55-71.

Ezeoha, A. E., & Francis, O. O., (2010). Local corporate ownership and capital structure decisions in Nigeria: a developing country perspective. *Corporate Governance, 10*(3). 249-260.

Fama, E. F. & Jensen, M. C. (1983). Separation of Ownership and Control. *Journal of Law and Economics. 26,* 1-31

Fama, E. F. & French, K. R. (2002). Testing Trade-Off and Pecking Order Predictions about Dividends and Debt. *The Review of Financial Studies, 15*(1), 1-33.

Fama, E. F. & French, K. R. (2012). Capital structure choices, *Critical Finance Review, 1,* 59-101.

Farouk, M. A. & Luka, M. (2013). Possession Structure and Performance of Listed Chemical and Paint Firms in Nigeria. *KASU Journal of Accounting Research and Practice, 2*(2), 175-188.

Fosberg, R. H. (2004). Agency problems and debt financing: Leadership structure effects, corporate governance. *International Journal of Business in Society, 4*(1), 31-38.

Frank, M. Z. & Goyal V. K. (2005).Trade-off and Pecking Order Theories of Debt. *Working Paper; Center for Corporate Governance, Tuck School of Business Dartmouth.*

Frank, M. Z., & Goyal, V. K. (2007). Capital structure decisions: Which factors are reliably important? *SSRN eLibrary*.

Frank, M. Z., & Goyal, V. K. (2009). Capital structure decisions: Which factors are reliably important? *Financial management, 38*(1), 1–37

Friend, 1. & Lang, L. (1988). An empirical test of the impact of managerial self-interest on corporate capital structure. *Journal of Finance,* 271-281.

Garba A. (2010). Determinants of Capital Structure in the Nigerian HealthCare Firms.

Gajurel, D. P. (2005). Determinants of capital structure in nepalese enterprises. *Published Master Degree Thesis, Kathmandu: Tribhuvan University, Nepal*

Ganiyu, Y. O., & Abiodun B. Y. (2012). The impact of corporate governance on capital structure decision of Nigerian firms. *Research Journal in Organizational Psychology and Educational Studies, 1*(2), 121-128.

Gebba, T. R. (2015). Corporate governance mechanisms adopted by UAE national commercial banks. *Journal of Applied Finance and Banking, 5*(5), 23-61.

Graham, J. R. & Harvey, C. R. (2001). The theory and practice of corporate finance: evidence from the field. *Journal of Financial Economics, 60*(2), 187-243.

Graham, J. R., & Leary, M. T., (2011). A review of empirical capital structure research and directions for the Future, *Annual Review of Financial Economics, 3,* 309- 345.

Graham, J. R., Leary, M. T. & Roberts, M. (2014a). A century of capital structure: The leveraging of corporate America, NBER Working Paper 19910, February 2014 http://www.nber.org/papers/w19910.

Graham, J. R., Leary, M. T., & Roberts, M. (2014b). How does government borrowing affect corporate financing and investment? *NBER Working Paper, April 16, 2014.*

Green, C.J., Murinde, V. & Suppakitjarak (2002) Corporate Financial Structure in India. *Economic Research Paper No. 02/4, Centre for International, Financial and Economics Research, Department of Economics.*

Griffin, M. M., & Steinbrecher, T. D. (2013). Large-scale datasets in special education research. International Review of Research in Developmental Disabilities, 45, 155-183

Grossman, S. J., & Hart, O. (1982). Corporate financial structure and managerial incentives. The economics of information and uncertainty. *University of Chicago Press, Chicago*, 107-140.

Gujarati, D. N. (2004). Basic econometrics 4th edition, Tata McGraw-Hill, New Delhi.

Gujarati, D. N. (2012). Econometrics by Example. Palgrave Macmillan United Kingdom

Gulati. (1997). Inflation, capital structure and immunization of the firm's growth potential. *Journal of Financial and Strategic Decisions,* 10, (1).

Guo, J., Ding, L., & Sun ,J. (2010). Company ownership and capital structure.

Hair, J., Black, W., Babin B., Anderson, R., &Talham, R. (2006). Multivariate Data Analysis. 6th edition, *Person Printice Hall, New Jersey.*

Hall, G. C., Hutchinson, P. J., & Michaelas, N. (2004). Determinants of the capital structures of European SMEs. *Journal of Business Finance & Accounting*, *31*(5-6), 711-728.

Hamze, G. M., Bentolhada, R., & Haed C., (2012). The impact of ownership structure and board structure on the financial performance: Evidence from Tehran Stock Exchange. *Journal of multidisciplinary Research* 1 ISSN 2278-0637.

Hackbarth, D. Miao, J & Morellec, E. (2006). Capital structure, credit risk, and macroeconomic conditions. *Journal of Finance and economics, 82*, 519-550.

Hassan, A., & Butt, S. A. (2009). Impact of ownership structure and corporate governance on capital structure of Pakistani listed companies *International Journal of Business and Management, 4*(2), 50-57.

Hassan, M. H., (2017). Corporate governance practices and firm's capital structure decisions: An empirical evidence of an emerging economy. *Accounting and Finance Research, 6*(4), 115- 129

Hassan, S. U. (2011). Determinants of capital structure in the Nigerian listed insurance firms. *International Conference on Management (ICM 2011) Proceeding*. 697-708.

Haugen, R. A., & Senbet L. W. (1988) Bankruptcy and Agency Costs: Their Significance to the Theory of Optimal Capital Structure. *Cambridge University Press, 23*(1), 27-37.

Heinrich, R. (2002). Complementarities in corporate governance: ownership concentration, capital structure, monitoring and pecuniary incentives. *Kiel working paper, no. 968.*

Heng, T.B. & Azrbaijani, S. (2012). Board of directors and capital structure: Evidence from leading Malaysian companies. *Asian Social Science, 8*(3), 123-136.

Heyman, D., Deloof, M., & Ooghe, H. (2008). The financial structure of private held Belgian firms. *Small Business Economics, 30*(3), 301-313.

Hoechle, D., (2007). Robust standard errors for panel regressions with cross-sectional dependence. *Stata Journal 7*(3), 281-312.

Hovakimian, A., Opler, T. & Titman, S. (2001). The debt-equity choice. *Journal of Financial and Quantitative Analysis, 36,* 1-24.

Hovakimian, A., Hovakimian, G., & Tehranian, H. (2004). Determinants of target capital structure: The case of dual debt and equity issues. *Journal of Financial Research, 71*(3), 517-540.

Hsiao, C., 2003. Analysis of Panel Data. Cambridge University Press, Cambridge.

Huang, R., & Ritter, J. R. (2009). Testing the market timing theory of capital structure. *Journal of Financial and Quantitative Analysis, 44*(2), 237-271.

Hussainey, K. & A. Al-Nodel, (2009). Does corporate governance drive financing decisions of Saudi -arabian companies? Working paper, University of Stirling, Scotland.

Hussainey, K., & Aljifri, K., (2012). Corporate governance mechanisms and capital structure in UAE. *Journal of Applied Accounting Research, 13*(2), 145-160.

İdiris Var (2013). The Relationship between Information Asymmetry and the Quality of Audit: An Empirical Study in Istanbul Stock Exchange. *International Business Research, 6*(10), 132-140.

Imran, K. & Farhan, W. (2016). Impact of Corporate Governance and Ownership Structure on Capital Structure. *International Journal of Management Sciences and Business Research, 5*(11), 119-133.

Ireland, J. C., & Lennox, C. (2002). The large audit firm fee premium: A case of selectivity bias. *Journal of Accounting, Auditing and Finance, 7,* 73-91.

Iwarere & Akinleye G.T, (2010). Capital structure determinants in the Nigerian banking industry: Financial managers' perspectives. *Pakistan Journal of Social Sciences,* 7, 205-213.

Jahanzeb, A., Rehman, S., Bajuri, N.H., Karami, M., & Ahmadimousaabad, A., (2014). Trade-off theory, pecking order theory and market timing theory: A comprehensive review of capital structure theories. *Int. J. Manage. Commer. Innov., 1*(1), 11-18.

Jensen, M., & Meckling, W. (1976). Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure. *Journal of Financial Economics, 3*(6), 305-360.

Jensen, M.C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review, 76*(2), 323-329.

Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance, 48,* 831-880.

Jiraporn, P. & Liu, Y. (2008). Capital structure, staggered boards, and firm value. *Financial Analysts Journal, 64*(1), 49-60.

Jiraporn, P., Y.S., Kim, J.C., & Kitsabunnarat, P. (2009). Does Corporate Governance Affect Capital Structure? *Online. http://www.ssrn.com.*

Kajananthan, R. (2012).Effect of Corporate Governance on Capital Structure: Case of the Sri-Lanka Listed Manufacturing Companies. *Journal of Arts, Science & Commerce 4*(1), 63.

Kajola, M. (2008), Corporate Governance and Firm Performance, The case of Nigeria listed firm. *European Journal of Economics, Finance and Administrative Sciences, 14*

Kane, G. D., & Velury, U. (2002). The role of institutional ownership in the market for auditing services: an empirical investigation. *Journal of Business Research*, 1-8.

Karadeniz, E., Kandir, S. Y., Balcilar, M., & Onal, Y. B. (2009). Determinants of capital structure: evidence from Turkish lodging companies. *International Journal of Contemporary Hospitality Management, 21*(5), 594-609.

Karartı, T. (2014) Impact of ownership structure on leverage of non-financial firms in developing countries. *International Research Journal of York University, 1*(1), 16-46

Kay, B. S., & Voltech, C. M. (2016). Corporate governance responses to director rule changes. *Journal of Leadership, Accountability, and Ethics*, *13*(1), 49–69.

Kazemian, S., & Zuraidah, M., S. (2015). Earnings management and ownership Structure. *Procedia Economics and Finance, 31* (2015), 618-624.

Keasey, K. & Wright, M. (1993). Issues in Corporate Accountability and Governance. *Accounting and Business Research, 23*(91a). 291-303

Keasey, K., Thompson, S., & Wright, M. (1997). Introduction: The corporate governance problem-competing diagnoses and solutions. In K. Keasey, S. Thompson and M. Wright, Corporate Governance: Economics, Management, and Financial Issues. *Oxford University Press: Oxford.*

Kennedy, P. M. (2013). Capital structure decision: An overview *Journal of Finance and Bank Management, 1(1), 14-27.*

Kester, C.W. (1986). Capital and ownership structure: a comparison of United States and Japanese manufacturing corporations. *Finance Manage, 15*, 5-16.

Khaled, H. (2009). The impact of audit quality on earnings predictability. *Managerial Auditing Journal, 24*(4), 340-351.

Khanna, S., Srivastava, A., & Medury, Y. (2013), Testing the market timing theory of capital structure for Indian firms. *JBIMS Spectrum, 1*(1), 9-20.

Khanna, S., Srivastava, A., & Medury, Y. (2014), Revisiting the capital structure theories with special reference to India. *The International Journal of Business and Management, 2*(8), 132-138.

Khanna, S., Srivastava, A., & Medury Y. (2015). The effect of macroeconomic variables on the capital structure decisions of Indian firms: A vector error correction model/ vector autoregressive approach. *International Journal of Economics and Financial Issues, 5*(4), 968-978.

Kim, W. S., & Sorensen, E. H., (1986). Evidence on the impact of the agency costs of debt on corporate debt policy. *The Journal of Financial and Quantitative Analysis, 21*(2), 131-144.

Kim, C., Mauer, D. C., & Sherman A. E. (1998). The determinants of corporate liquidity: Theory and evidence. *Journal of Financial and Quantitative Analysis, 33*, 335-59.

Knechel, W. R., Krishnan, G. V., Pevzner, M., Shefchik, L. B., & Velury, U. K. (2013). Audit quality: Insights from the academic literature. Auditing: *A Journal of Practice & Theory, 32*(1), 385-421.

Korajczyk, R., A. & Levy A. (2003) Capital structure choice: macroeconomic conditions and financial constraints. *Journal of Financial Economics, 68*(1), 75-109.

Kraus, A. & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *Journal of Finance,* vol. 28, 911-922.

Kurshev, A. & Strebulaev I. A. (2005). Firm Size and Capital Structure; *Working Paper (London Business School).*

Kurshev, A & Strebulaev, I. A. (2015). Firm size and capital structure, *Quarterly Journal of Finance, 5*(3), 1-46.

Kyereboah-Coleman, A., (2007). The impact of capital structure on the performance of microfinance institutions, *The Journal of Risk Finance, 8*(1), 56-71

Kyereboah-Coleman, A. & Biekpe, N. (2006). Corporate governance and financing choices of firms: a panel data analysis. *South African Journal of Economics, 74*(4), 670-81.

La bruslerie, H. & Latrous, I. (2007). Ownership Structure and Debt leverage: *Empirical Test*

Lakshmi, K. (2009). Ownership structure and capital structure: evidence from Indian firms. *Working paper.*

La Rocca, M., (2007). The influence of corporate governance on the relation between capital structure and value. *Corporate Governance: The international journal of business in society, 7*(3), 312-325.

La Porta, R., & Lopez-de-Silanes. (1999). Corporate ownership around the world, *Journal of Finance, 54,* 471-517.

Lawal, B., (2012) Board dynamics and corporate performance: Review of literature and empirical challenges *International journal of economic and finance, 4*, 22-35

Le, T. P. V., (2015). Ownership Structure, Capital Structure and Firm Performance: A Study of Vietnamese Listed Firms. *A Doctor of Business Administration thesis University of Western Sydney.*

Lemma, T. T., & Negash, M. (2013). Institutional, macroeconomic and firm-specific determinants of capital structure the African evidence. *Management Research Review, 36*(11), 1081-1122.

Lemmon, M., Roberts, M. & Zender, J. (2008). Back to the beginning: persistence and the cross section of corporate capital structure, *Journal of Finance, 63*, 1575 -1608.

Lev, B. (1988). Toward a theory of equitable and efficient accounting policy. *The Accounting Review, 63*, 737-783.

Liao, L., Mukherjee, T. K., & Wang, W. (2012). Does corporate governance impact capital structure adjustments? *Midwest Finance Association 2013 Annual Meeting Paper.*

Lin, T., Hutchinson, M., & Percy, M. (2015). Earnings management and the role of audit committee: An investigation of the influence of cross-border listing and government officials on the audit committee. *Journal of Management and Governance*, *19*, 197-227.

Lucas, D. J. & McDonald L. R (1990). Equity issues and stock price dynamics. *The Journal of Finance, 45*(4), 1019-1043.

MacKie-Mason, J. (1990). Do taxes affect corporate financing decisions? *Journal of Finance 45*, 1471-1493.

Mansi, A., Maxwell, W. F., & Miller, D. P. (2004). Does Auditor Quality and Tenure Matter to Investors? Evidence from the Bond Market. *Journal of Accounting Research, 42*(4), 755-793.

Marsh, P. (1982). The choice between equity and debt: an empirical study. *Journal of Finance, 37*(1), 121-144.

Maher, M., & Andersson, T., (1999). Corporate governance: Effects on firm performance and economic growth. *Organization for economic co-operation and development* 1-51.

Mayes, G. D., Halme, L., & Liuksila, A., (2001). Improving Banking Supervision. *Palgrave Macmillan New York. Page 91-120.*

Mazlina M. & Ayoib, C. A., (2011). Agency theory and managerial ownership: Evidence from Malaysia. *Managerial Auditing Journal, 26*(5), 419-436.

McConnell, J. J., & Servaes, H., (1995). Equity ownership and the two faces of debt. *Journal of Financial Economics, 39*(1), 131-157.

Mehran, H., (1992). Executive incentive plans, corporate control, and capital structure. *The Journal of Financial and Quantitative Analysis, 27*(4), 539-560.

Michaely, R. & Vincent, C. (2012). Do institutional investors influence capital structure decisions? Working Paper, Cornell University.

Miko, N. U. & Kamardin, H. (2015b). Ownership Structure and Dividend Policy of Conglomerate Firms in Nigeria. *Academic Journal of Interdisciplinary Studies, 4*(2), 279-286.

Miko, N. U., & Kamardin, H. (2015a). Corporate governance and financial reporting quality in Nigeria: Evidence from Pre- and Post- Code 2011. *International Journal of Emerging Science and Engineering, 4*(2), 1-7.

Miko, N. U., & Kamardin, H. (2016). Prospect and challenges of corporate governance development in Nigeria: Pre- and Post-Independence. *Academic Journal of Management Science Research, 1*(1), 33-39

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review, 48*(3), 261-287.

Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: A correction. *The American Economic Review, 53*(3), 433-443.

Mostafa, H. T., & Boregowda, S. (2014). A Brief Review of Capital Structure Theories. *Research Journal of Recent Sciences, 3*(10), 113-118.

Mudalige N. & Athula E. (2015). The influence of corporate governance on capital structure decisions of listed companies in Sri-lanka. *Modern Sri Lanka Studies, 6*(1), 41-59.

Muhammad, N., Ahmad, R., Ahmad, U., Noraini, B., & Melati, A. (2013). Evidence of capital structure discipline in financial markets: A study of leasing and insurance companies of Pakistan, *Research Journal of Management Sciences*, *2*(1), 7-12.

Mutenheri. E., & Green, C. (2002). Financial reform and financing decisions of listed firms in Zimbabwe. *Department of Economics, Loughborough University Working Paper*

Muthama, C., Mbaluka, P., & Kalunda, E. (2013). An empirical analysis of macro-economic influences on corporate capital structure of listed companies in Kenya. *Journal of Finance and Investment Analysis, 2*(2), 41-62.

Myers, S. C. (1977). The determinants of corporate borrowing, *Journal of Financial Economics, 5,* 147-175.

Myers, S.C. (1984). The capital structure puzzle, *Journal of Finance, 39.* 575-592.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics, 13*, 187-221.

Myers, S., C. (2001). Capital Structure. *Journal of Economic perspective, 15*(2), 81-102.

Nadeem, A., & Sheikh Z. W., (2012). Effects of corporate governance on capital structure: empirical evidence from Pakistan. *Corporate Governance: The international journal of business in society, 12*(5), 629-641.

Nanyang, X. C., & Dasgupta S. (2009). The effect of Auditor quality on financing decisions. *American Accounting Association, 84*(4), 1085-1117.

Nduka A. J., & Ucheahara O. F., (2016) Financing corporate organization for effective performance in Nigeria, Equity or Debt option. *African journal of Education, science and technology, 3*(2), 196-204.

Odedokun, M.O. (1995). Dividend policy, Investment Spending and Financing decisions: Evidence from Nigeria quoted non-financial firms Nigeria. *Journal of Economics and Social Studies. 37*(3), 185-201.

Ogbulu, O. M. & Emeni, F. K. (2012). Determinants of corporate capital structure in Nigeria. *International Journal of Economics and Management Science, 1*(10), 81-96.

Ogebe, P., Ogebe, J., & Alewi, K., (2013). The impact of capital structure on firm performance in Nigeria *MPRA paper No 46173*

Ojo, M. (2011). The role of external auditors incorporate governance: agency problems and the management of risk. *MPRA Paper No. 28149*

Olatundun, O. (2002). Mortgage processing in FMBN, *FMBN Journal Lagos,* (3), 26-34.

Olokoyo, F. O., (2012). Capital structure and corporate performance of Nigerian quoted firms: a panel data approach. *Doctor of philosophy Thesis Covenant University, Ota,Ogun State, Nigeria.*

Olowoniyi A.O., Akinleye G.T., & Afolabi A.A. (2012). Determinants of capital structure of Nigerian-Listed Firms. *Journal of African Economics and Finance ISSN1986-4582 Issue 4 Euro Journals Publishing, Inc. 2012 http://www.euurojournals.com/jaef.htm.*

Okafor, I. G., Ugochukwu, U, S., & Hillary, E. C., (2016). The Effect of Ownership Concentration on the Performance of Nigerian Banking Industries: An Empirical Investigation. *Journal of Research in Business, Economics and Management, 6*(2), 835-844

Okpara, J.O. (2010). Perspectives on corporate governance challenges in a sub-sahara-African economy. *Journal of Business and policy Research, 5*(1), 110-122.

Otnet, G. (2006). Ownership Structure and Capital Structure: Evidence from Jordanian Capital Market (1995-2003). Corporate Ownership & Control 3: Issue 4

Oyejide, T. A., & Soyibo, A. (2001). Corporate governance in Nigeria. *Paper presented at the Conference on Corporate Governance Accra, Ghana.*

Park, H. M. (2008). Univariate analysis and normality test using SAS, Stata, and SPSS. *The Trustees of Indiana University.*

Pallant, J. (2005). SPSS survival manual: a step by-step guide to data analysis using SPSS *for* Windows 2nd, edition. *Open University Press, Buckingham.*

Pallant, J. (2011). SPSS Survival Manual: A step by step guide to data analysis using SPSS for windows 3rd edition. England: *McGraw Hill Open University Press.*

Palmrose, Z. V. (2013). PCAOB audit regulation a decade after SOX: Where it stands and what the future holds. *Accounting Horizons, 27*(4), 775-798.

Pandey, I. M. (2004). Financial Management, New Delhi. *Vikas Publishing House PVT Ltd.*

Perera H. A. P. K., & Gunadeera D. T. N. (2015) Impact of institutional and Macroeconomic Conditions on Corporate Capital Structure: Evidence form the Firms Listed in the Colombo Stock Exchange. *The 10th International Research Conference on Management and Finance*

Peter N. (2015) Impact of the 2007/2008 global financial crisis on the stock market in Nigeria. *CBN Journal of Applied Statistics, 6*(1a), 49-68.

Petersen, M. A. & Rajan. R.G. (1994). The benefits of lending relationship: Evidence from small business data. *Journal of Finance, 49*(1), 3-37.

Pfaffermayr, M., Stockl, M., & Winner, H. (2008). Capital structure, corporation taxation and firm age. *Austrian Institute of Economic Research Working Paper, Available at: http://www.sbs.ox.ac.uk/centres/tax/Documents/working_papers/WP0829.pdf*

Pfeffer, J. (1973). Size, composition and function of corporate boards of directors: The organisation-environment linkage. *Administrative Science Quarterly, 18*, 349-364.

Pfeffer, J., & Salancick, G. R. (1978). The External Control of Organizations: A Resource Dependence Perspective, *Harper and Row, New York.*

Phillips, P. A., & Sipahioglu, M. A. (2004). Performance implication of capital structure: Evidence from quoted UK organisations with hotel interests. *The Service Industries Journal, 24*(5), 31-51.

Pindado, J., & La Torre, D. C. (2011). Capital structure: new evidence from the ownership structure. *International Review of Finance, 11*(2), 213-226.

Pound, J. (1988). Proxy Contests and the Efficiency of Shareholder Oversight, *Journal of Financial Economics,* 20, 237-265.

Quadri H (2010). Conceptual framework for corporate governance in Nigeria: Challenges and panaceas. *Pm World Today – Featured Paper, 12*(9), 1-8

Rajan, R. G., & Zingales, L. (1995). What do we know about capital structure? Some evidence from ınternational data. *The Journal of Finance, 50*(5), 1421-1460.

Rajendran, K., (2012). Effect of corporate governance on capital structure: Case of the Sri Lankan listed manufacturing companies. *Journal of Arts, Science & Commerce*.

Rashid, K., & Islam, S.M.N. (2013). Corporate governance, complementarities, and the value of a firm in an emerging market: *The effect of imperfections. Corporate Governance, 13*(1), 70–87.

Reed, W. R. & Webb, R. (2010). The PCSE Estimator is Good – Just Not as Good As You Think. *Journal of Time Series Econometrics, 2*(1) Article 8

Rehman, M. A., Rehman, R. U., & Raoof, A. (2010). Does corporate governance lead to a change in the capital structure? *American Journal of Social and Management Sciences, 1*(2), 191-195.

Riaz, F., Bhatti, K., & Shahab-ud-Din. (2014). Macroeconomic conditions and firm's choices of capital structure: Evidence from Pakistan's manufacturing sector. *Middle-East Journal of Scentific Research, 19*(4), 521-531.

Roden, D. & Lewellen, W. (1995). Corporate capital structure decisions: evidence from leveraged buyouts. *Financial Management, 24*, 76-87.

Rouf, M. A., (2011). The relationship between corporate governance and value of the firm in developing countries: Evidence from Bangladesh, International Journal of Applied Economics and Finance, 5(3), 237-244.

Saad, N. M. (2010). Corporate governance compliance and the effects to capital structure in Malaysia. *International Journal of Economics and Finance, 2*(1), 105-114.

Salawu, R. O. (2007a). An Empirical Analysis of the Capital Structure of Selected Quoted Companies in Nigeria. *The International Journal of Applied Economics and Finance, 1*, 16-28.

Salawu, R.O. (2007b). An empirical analysis of the capital structure of selected quoted companies in Nigeria. *An Unpublished M. Phil Thesis submitted to the Department of Management and Accounting, Obafemi Awolowo University, Ile-Ife, Nigeria.*

Salawu, R. O., & Agboola, A. A. (2008). The determinants of capital structure of large non-financial listed firms in Nigeria. *The International Journal of Business and Finance Research. 2*(2).

Salma, K., (2009) Ownership concentration and capital structure adjustments. *CEREG-DRM Paris-Dauphine University*.

Security and Exchange Commission. (2011). Code of corporate governance for public companies in Nigeria, *Nigeria Security and Exchange Commission, 1-56.*

Sekaran, U. & Bougie, R. (2010). Research Methods for Business: A skill building approach, Fifth edition, Wiley India (Pvt) Ltd, New Delhi.

Shafana, M. (2016). Board of directors' characteristics impact on capital structure decisions. *International Journal of Science and Research, 6*(10), 79-86.

Sheikh, N. A., & Wang, Z. (2010). Financing Behavior of Textile Firms in Pakistan. *International Journal of Innovation, Management and Technology, 1*(2), 130-135.

Sheikh, N. & Wang, A.Z (2011). Determinants of capital structure. *Managerial Finance, 37*(2), 117-133.

Sheikh N.A., & Wang Z. (2012). Effects of corporate governance on capital structure: Empirical evidence from Pakistan. *Corporate Governance, 12,* 629-641.

Shehu U. H. (2011). Determinants of Capital Structure in the Nigerian Listed Insurance Firms, *International Journal of China – USA Business Review, 10*(12), 81-98.

Shi, Y. (2010) Corporate Financing Policy under Large Shareholder's Control: Evidence from Chinese Listed Companies *[online] http://ssrn.com/abstract=1547663*

Shivdasani, A., & Zenner, M. (2005). How to choose a capital structure: Navigating the Debt-Equity Decision. *Journal of Applied corporate finance, 17*(12), 219-244.

Shleifer, A., & Vishny, R. W., (1986). Large shareholders and corporate control. *The Journal of Political Economy, 94*(3), 461-488.

Shleifer, A., & Vishny, R. (1997). A Survey of Corporate Governance. *Journal of Finance, 52,* 737-783.

Shome, D., & Singh S. (1995). Firm value and external block holdings, *Financial Management, 24, 3-14.*

Short, H., Keasey, K., & Duxbury, D. (2002). Capital structure, management ownership and large external shareholders: a UK analysis. *International Journal of the Economics of Business, 9*(3), 375-399.

Singh, M. Wallace, N. & Suchard, J, (2003). Corporate diversification strategies and capital structure. *The quarterly review of economics and finance, 43, 147-167.*

Siregar, S. V., & Utama. S. (2008). Type of earnings management and the effect of ownership structure, firm size, and corporate-governance practice: Evidence from Indonesia. *The International Journal of Accounting, 43*, 1-27.

Skinner, D. J., & Srinivasan, S. (2012). Audit quality and auditor reputation: Evidence from Japan. *The Accounting Review 87*, 1737-1765.

Solomon, M. (2012). Firms‟ characteristics and capital structure: A panel data analysis from Ethiopian insurance industry, *International Journal of Research in Commerce and Management, 3*

Somathilake, H. M. D. N., & Udaya-Kumara K. G. A. (2015). The effect of corporate governance attributes on capital structure: An empirical evidence from listed manufacturing companies in Colombo stock exchange. *International Research Symposium, Rajarata University of Sri Lanka, 22-29.*

Spanos, LJ (2005). Corporate Governance in Greece: Developments and Policy Implications. *Corporate Governance, 5*(1), 15-30.

Studenmund A. H (2014). Using Econometrics. A Practical Guide. *Pearson Education Limited Sixth Edition.*

Stulz, R. (1988), Managerial control of voting right: Financing policies and the market for corporate control, *Journal of Financial Economics, 20*, 25-57.

Stulz, R. (1990), Managerial discretion and optimal financing policies. *Journal of Financial Economics, 26*, 3-27.

Suto, M. (2003). Capital Structure and Investment Behavior of Malaysian firms in the 1990s: A Study of Corporate Governance before the Crisis. *Corporate Governance 11: Number 1*

Tabachnick, B. G. & Fidell, L. S. (2007). Using multivariate statistics (5th edn). Boston: Pearson Education.

Tang, C.H. H., & Jang, S. S. (2007). Revisit to the determinants of capital structure: A comparison between lodging firms and software firms. *Hospitality Management, 26*, 175-187.

Tarus T. K., Nehemiah, C., & Geoffrey, B. (2014). Do profitability, firm Size and liquidity affect capital structure? Evidence from Kenyan listed firms. *European Journal of Business and Management, 6*(28), 119-124.

Titman, S. & Wessels, R. (1988). The determinants of capital structure choice. *Journal of Finance, 43*(1), 1-19.

Tornyeva, K. (2013). Determinants of capital structure of insurance companies in Ghana, *Research Journal of Finance and Accounting, 4*(13).

Toyin, I. L., (2017). The Relationship between Corporate Governance and Organizational Performance in Nigerian Companies. *Doctor of Philosophy Management Dissertation Walden University*

Uwuigbe O. R. (2013). The effects of board size and CEO duality on firms' capital structure: A study of selected listed firms in Nigeria. *Asian Economic and Financial Review, 3*(8), 1033-1043.

Uwuigbe, U., (2014). Corporate governance and capital structure evidence from listed firms in Nigeria stock exchange. *Journal of Accounting and Management JAM, 4*(1), 5-14.

Vafeas, N., (2000). Board structure and the in formativeness of earnings, *Journal of Accounting and Public Policy, 19*(2), 139-160.

Vakilifard, H. R., Gerayli, M. S., Yanesari, A. M., & Ma'atoofi, A. R. (2011). Effect of Corporate Governance on Capital Structure: Case of the Iranian Listed Firms. *European Journal of Economics, Finance and Administrative Sciences, 35,* 165-172.

Varun, D. (2014) Agency theory, capital structure and firm performance: some Indian evidence. *Managerial Finance, 40*(12), 1190-1206.

Velnampy, T., & Aloy, J. N., (2012). The relationship between capital structure & profitability *Global Journal of Management and Business Research, 12*(13), 66-74

Viv B., Liz, C. & Jonathan, B., (2003) Statistics review 7: Correlation and regression *Crit Care. 7(*6), 451–459. Published online 2003 Nov 5

Wen, Y., Rwegasira, K., & Bilderbeek, J., (2002). Corporate governance and capital structure decisions of Chinese listed firms. *Corporate governance. An International Review, 10*(2), 75-83.

Wiwattanakantang, Y. (1999). An empirical study on the determinants of the capital structure of Thai firms. *Pacific-Basin Finance Journal, 7*(3-4), 371-403.

Yisau, A. B. (2016). Analysis of capital structure and effectiveness of business enterprises for national sustainable development and disaster management. *Journal of Emerging Trends in Educational Research and Policy Studies, 7*(4), 318-325.

Yoshikawa, T., Zhu, H., & Wang, P. (2014). National governance system, corporate ownership, and roles of outside directors: A corporate governance bundle perspective. *Corporate Governance: An International Review, 22*, 252-265.

Zare, R., Farzanfar, F., & Boroumand, M (2013). Examining the firm age, size and asset structure effects on financial leverage in the firms listed in Tehran Stock Exchange. *International Journal of Economy, Management and Social Sciences, 2*(6), 256-264

Zeitun R., & Tian G. G. (2007). Capital structure and corporate performance: Evidence from Jordan. *Australasian Accounting, Business & Finance Journal, 1*(4), 40-61.

Zou, H. & Xiao, J. Z. (2006). The financing behaviour of listed Chinese firms. *The British Accounting Review, 38*(3), 239-258.

APPENDIX

```
  ___  ____  ____  ____  ____ (R)
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   13.0   Copyright 1985-2013 StataCorp LP
  Statistics/Data Analysis            StataCorp
                                      4905 Lakeway Drive
     Special Edition                  College Station, Texas 77845 USA
                                      800-STATA-PC        http://www.stata.com
                                      979-696-4600        stata@stata.com
                                      979-696-4601 (fax)

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                       IDRE-UCLA

Notes:
      1.  (/v# option or -set maxvar-) 5000 maximum variables

. import excel "C:\Users\HP\Desktop\Preliminary Data & Result\Final Data.xlsx", sheet("Update Data") firstrow

. xtset Firms Years
       panel variable:  Firms (strongly balanced)
        time variable:  Years, 2012 to 2016
                delta:  1 unit
```

Appendix A: Descriptive Analysis for the variables (2012-2016)

variable	mean	p50	min	max	sd	skewness	kurtosis
TDRwinsor	.5603101	.5540185	.1817792	.9862211	.2215642	.1643836	2.226676
BSwinsor	8.684906	9	5	13	2.201726	.3073439	2.300296
BMwinsor	4.745283	4	4	7	1.029447	1.096388	2.830734
BIwinsor	.77494	.8	.55	.909	.1051697	-.6210405	2.361333
BHOwinsor	59.93136	64	17	88	20.10673	-.6551017	2.576224
MOwinsor	18.73328	4.71	0	76.78	25.11151	1.245202	3.205515
IOwinsor	49.57367	55	0	87.95	27.29023	-.5096718	2.10425
B4	.5433962	1	0	1	.4985838	-.1742424	1.03036
FAwinsor	31.04151	32	5	59	16.69945	.0708691	1.907043
Totalasset~r	3.02e+10	8.27e+09	4.20e+08	2.08e+11	5.08e+10	2.476267	8.531347
FGwinsor	7.916132	4.577071	-20.9253	54.27999	17.84422	.9024308	3.704241
GDP	3.423019	4.2	-1.6	6.2	2.763788	-.9055403	2.444549
INF	10.7	9	8.1	15.7	2.89202	.7897081	2.030555
BLR	12.4	12	11	14	1.020767	.2715454	1.955621

Appendix B: VIF and Tolerance value for Independent variables

```
. vif
```

Variable	VIF	1/VIF
INF	5.36	0.186557
GDP	4.28	0.233491
IOwinsor	2.99	0.334596
BHOwinsor	2.34	0.426763
MOwinsor	1.82	0.549073
FSwinsor	1.69	0.592838
BLR	1.68	0.595597
BSwinsor	1.29	0.776083
FAwinsor	1.29	0.777647
B4	1.27	0.790180
BIwinsor	1.21	0.826751
BMwinsor	1.16	0.862951
FGwinsor	1.09	0.914079

Appendix C: Correlation Matrix of the variables

	TDRwin~r	BSwinsor	BMwinsor	BIwinsor	BHOwin~r	MOwinsor	IOwinsor
TDRwinsor	1.0000						
BSwinsor	-0.1108	1.0000					
BMwinsor	-0.1343	0.1747	1.0000				
BIwinsor	-0.0905	0.0784	-0.1115	1.0000			
BHOwinsor	0.0137	-0.0612	0.0530	0.0371	1.0000		
MOwinsor	-0.2096	-0.1244	-0.1014	-0.0531	0.0788	1.0000	
IOwinsor	0.0097	0.0883	0.1378	0.1988	0.6459	-0.3886	1.0000
B4	0.0660	0.1184	0.2297	0.0280	0.1929	-0.2090	0.3018
FAwinsor	0.2464	0.0222	0.1484	0.0303	-0.0164	-0.4391	0.1642
FSwinsor	0.0999	0.4174	0.2656	-0.1687	0.0780	-0.2641	0.2977
FGwinsor	0.1221	-0.0123	0.0307	0.0536	0.1567	-0.0355	0.1723
GDP	-0.0576	-0.0139	-0.0915	-0.0210	-0.0438	-0.0147	-0.0053
INF	0.0580	0.0034	0.0572	0.0251	0.0479	0.0107	0.0062
BLR	0.0413	-0.0094	0.0899	0.0067	0.0393	0.0066	0.0106

	B4	FAwinsor	FSwinsor	FGwinsor	GDP	INF	BLR
B4	1.0000						
FAwinsor	0.1428	1.0000					
FSwinsor	0.3672	0.0773	1.0000				
FGwinsor	0.1245	-0.0424	0.1618	1.0000			
GDP	-0.0161	-0.0805	-0.0271	-0.0010	1.0000		
INF	0.0047	0.0620	0.0146	0.0708	-0.8675	1.0000	
BLR	0.0215	0.0496	0.0223	0.0732	-0.4699	0.6177	1.0000

Appendix D: Diagnostic Test

```
. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        TDRwinsor[Firms,t] = Xb + u[Firms] + e[Firms,t]

        Estimated results:
                     |       Var     sd = sqrt(Var)
             ---------+-----------------------------
             TDRwinsor|    .0490907       .2215642
                     e|    .0120485       .1097657
                     u|    .0308833       .1757365

        Test:   Var(u) = 0
                            chibar2(01) =   487.53
                          Prob > chibar2 =   0.0000

                           b = consistent under Ho and Ha; obtained from xtreg
                B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                 chi2(13) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       22.40
                Prob>chi2 =      0.0494
                (V_b-V_B is not positive definite)

. hettest BS BM BC BHO MO IO B4 FA FS FGwinsor GDP INF BLR

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: BS BM BC BHO MO IO B4 FA FS FGwinsor GDP INF BLR

         chi2(13)     =    70.73
         Prob > chi2  =    0.0000

. imtest, white

White's test for Ho: homoskedasticity
          against Ha: unrestricted heteroskedasticity

          chi2(99)      =     198.96
          Prob > chi2   =     0.0000

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
              Source |       chi2     df       p
---------------------+-----------------------------
  Heteroskedasticity |     198.96     99    0.0000
            Skewness |      43.70     13    0.0000
            Kurtosis |      17.66      1    0.0000
---------------------+-----------------------------
               Total |     260.32    113    0.0000
---------------------------------------------------

 Wooldridge test for autocorrelation in panel data
 H0: no first-order autocorrelation
     F(  1,     105) =     16.623
           Prob > F =      0.0001
```

Appendix E: Regression result using OLS

```
. reg TDRwinsor BSwinsor BMwinsor BIwinsor BHOwinsor MOwinsor IOwinsor B4 FAwinsor FSwinsor FGwinsor GDP
```

Source	SS	df	MS		
Model	4.63858654	13	.356814349	Number of obs	= 530
Residual	21.3303953	516	.041337975	F(13, 516)	= 8.63
				Prob > F	= 0.0000
				R-squared	= 0.1786
				Adj R-squared	= 0.1579
Total	25.9689818	529	.049090703	Root MSE	= .20332

TDRwinsor	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
BSwinsor	-.0139967	.0045575	-3.07	0.002	-.0229503	-.0050431
BMwinsor	-.0439075	.0092438	-4.75	0.000	-.0620676	-.0257474
BIwinsor	-.1347127	.0924419	-1.46	0.146	-.3163214	.0468961
BHOwinsor	.001526	.000673	2.27	0.024	.0002039	.0028482
MOwinsor	-.001778	.0004751	-3.74	0.000	-.0027113	-.0008447
IOwinsor	-.0017408	.00056	-3.11	0.002	-.0028409	-.0006407
B4	.010244	.0199455	0.51	0.608	-.0289405	.0494284
FAwinsor	.0028604	.0006003	4.77	0.000	.0016811	.0040397
FSwinsor	.0469588	.0157305	2.99	0.003	.016055	.0778626
FGwinsor	.0014922	.0005182	2.88	0.004	.0004742	.0025101
GDP	-.005898	.0066192	-0.89	0.373	-.018902	.0071059
INF	-.0023273	.0070768	-0.33	0.742	-.0162303	.0115756
BLR	.003847	.0112213	0.34	0.732	-.0181981	.0258921
_cons	.4470724	.2235451	2.00	0.046	.0079019	.8862429

Appendix F: Regression Result using Random Effect

```
. xtreg TDRwinsor BSwinsor BMwinsor BIwinsor BHOwinsor MOwinsor IOwinsor B4 FAwinsor FSwinsor FGwinsor GDP
```

```
Random-effects GLS regression                   Number of obs      =       530
Group variable: Firms                           Number of groups   =       106

R-sq:  within  = 0.0490                         Obs per group: min =         5
       between = 0.1777                                        avg =       5.0
       overall = 0.1436                                        max =         5

                                                Wald chi2(13)      =     38.54
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0002
```

TDRwinsor	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
BSwinsor	-.0016594	.004967	-0.33	0.738	-.0113946	.0080757
BMwinsor	-.0135119	.0083964	-1.61	0.108	-.0299686	.0029449
BIwinsor	-.0139679	.0946441	-0.15	0.883	-.199467	.1715311
BHOwinsor	.001534	.0007944	1.93	0.053	-.0000229	.0030909
MOwinsor	-.0009934	.0006334	-1.57	0.117	-.0022348	.0002481
IOwinsor	-.0018185	.0007652	-2.38	0.017	-.0033182	-.0003188
B4	-.0006907	.0229043	-0.03	0.976	-.0455824	.0442009
FAwinsor	.002116	.0008793	2.41	0.016	.0003925	.0038394
FSwinsor	.0310552	.0258195	1.20	0.229	-.01955	.0816605
FGwinsor	.0011113	.0003378	3.29	0.001	.0004492	.0017735
GDP	-.0035077	.0037333	-0.94	0.347	-.0108248	.0038094
INF	-.0002946	.003927	-0.08	0.940	-.0079914	.0074022
BLR	.0020891	.0061977	0.34	0.736	-.0100582	.0142364
_cons	.2728548	.2793853	0.98	0.329	-.2747303	.8204399
sigma_u	.1757365					
sigma_e	.10976571					
rho	.71935712	(fraction of variance due to u_i)				

Appendix G: Regression Result using Fixed Effect

```
. xtreg TDRwinsor BSwinsor BMwinsor BIwinsor BHOwinsor MOwinsor IOwinsor B4 FAwinsor FSwinsor FGwinsor GDP
```

```
Fixed-effects (within) regression               Number of obs      =       530
Group variable: Firms                           Number of groups   =       106

R-sq:  within  = 0.0669                         Obs per group: min =         5
       between = 0.0104                                        avg =       5.0
       overall = 0.0018                                        max =         5

                                                F(13,411)          =      2.27
corr(u_i, Xb)  = -0.3726                        Prob > F           =    0.0069
```

TDRwinsor	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
BSwinsor	.006036	.0057945	1.04	0.298	-.0053545	.0174265
BMwinsor	-.0039771	.0091482	-0.43	0.664	-.0219602	.014006
BIwinsor	.0290876	.1057609	0.28	0.783	-.1788121	.2369874
BHOwinsor	.0021452	.0010058	2.13	0.034	.000168	.0041224
MOwinsor	.0006107	.0008813	0.69	0.489	-.0011217	.0023432
IOwinsor	-.0024988	.0011031	-2.27	0.024	-.0046673	-.0003304
B4	-.0011153	.0268043	-0.04	0.967	-.0538059	.0515754
FAwinsor	.0000558	.0013272	0.04	0.966	-.0025531	.0026647
FSwinsor	-.0260285	.0722935	-0.36	0.719	-.1681396	.1160826
FGwinsor	.0011658	.0003637	3.21	0.001	.0004509	.0018807
GDP	-.0047538	.0040406	-1.18	0.240	-.0126966	.0031889
INF	-.0012639	.0041323	-0.31	0.760	-.009387	.0068592
BLR	.0034368	.0063408	0.54	0.588	-.0090276	.0159012
_cons	.7237202	.7253436	1.00	0.319	-.7021259	2.149566
sigma_u	.21537517					
sigma_e	.10976571					
rho	.79381334	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(105, 411) =    12.95                 Prob > F = 0.0000
```

Appendix H: Regression Result using PCSEs

```
. xtpcse TDRwinsor BSwinsor BMwinsor BIwinsor BHOwinsor MOwinsor IOwinsor B4 FAwinsor FSwinsor FGwinsor GDP
```

```
Linear regression, correlated panels corrected standard errors (PCSEs)

Group variable:    Firms                        Number of obs      =       530
Time variable:     Years                        Number of groups   =       106
Panels:            correlated (balanced)        Obs per group: min =         5
Autocorrelation:   no autocorrelation                          avg =         5
                                                               max =         5
Estimated covariances      =      5671         R-squared          =    0.1786
Estimated autocorrelations =         0         Wald chi2(13)      =   2407.12
Estimated coefficients     =        14         Prob > chi2        =    0.0000
```

TDRwinsor	Panel-corrected Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
BSwinsor	-.0139967	.0035158	-3.98	0.000	-.0208875	-.007106
BMwinsor	-.0439075	.0077851	-5.64	0.000	-.059166	-.028649
BIwinsor	-.1347127	.0768216	-1.75	0.080	-.2852802	.0158549
BHOwinsor	.001526	.0003986	3.83	0.000	.0007448	.0023073
MOwinsor	-.001778	.0002097	-8.48	0.000	-.0021889	-.001367
IOwinsor	-.0017408	.0003004	-5.79	0.000	-.0023296	-.0011519
B4	.010244	.0106978	0.96	0.338	-.0107234	.0312113
FAwinsor	.0028604	.0002254	12.69	0.000	.0024186	.0033022
FSwinsor	.0469588	.0073334	6.40	0.000	.0325856	.061332
FGwinsor	.0014922	.0003564	4.19	0.000	.0007935	.0021908
GDP	-.005898	.0011727	-5.03	0.000	-.0081965	-.0035996
INF	-.0023273	.001186	-1.96	0.050	-.0046518	-2.86e-06
BLR	.003847	.0010173	3.78	0.000	.0018532	.0058408
_cons	.4470724	.0892143	5.01	0.000	.2722157	.6219291

Appendix I: LTDR Regression Result using PCSEs

```
. xtpcse LTDRwinsor BSwinsor BMwinsor BIwinsor BHOwinsor MOwinsor IOwinsor B4 FAwinsor FSwinsor FGwinsor GDP

Linear regression, correlated panels corrected standard errors (PCSEs)

Group variable:    Firms                          Number of obs      =       530
Time variable:     Years                          Number of groups   =       106
Panels:            correlated (balanced)          Obs per group: min =         5
Autocorrelation:   no autocorrelation                                 avg =         5
                                                                      max =         5
Estimated covariances      =      5671           R-squared          =    0.0924
Estimated autocorrelations =         0           Wald chi2(13)      =    635.99
Estimated coefficients     =        14           Prob > chi2        =    0.0000
```

LTDRwinsor	Panel-corrected Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
BSwinsor	.0046928	.0033666	1.39	0.163	-.0019056	.0112913
BMwinsor	-.0343136	.0063245	-5.43	0.000	-.0467094	-.0219178
BIwinsor	-.0245827	.0364921	-0.67	0.501	-.0961058	.0469405
BHOwinsor	.0000942	.0001994	0.47	0.637	-.0002966	.000485
MOwinsor	.0000837	.0001154	0.73	0.468	-.0001425	.0003099
IOwinsor	-.0002344	.0001207	-1.94	0.052	-.0004709	2.22e-06
B4	-.0390278	.0112194	-3.48	0.001	-.0610174	-.0170383
FAwinsor	.0000653	.0003221	0.20	0.839	-.0005659	.0006966
FSwinsor	.0348578	.0052077	6.69	0.000	.0246509	.0450647
FGwinsor	-.0000103	.0003921	-0.03	0.979	-.0007788	.0007581
GDP	-.0019164	.0009553	-2.01	0.045	-.0037889	-.000044
INF	-.0029578	.0009426	-3.14	0.002	-.0048052	-.0011103
BLR	.0052353	.0011129	4.70	0.000	.003054	.0074167
_cons	-.0449917	.062553	-0.72	0.472	-.1675933	.0776098

Appendix J: STDR regression result using PCSEs

```
. xtpcse STDRwinsor BSwinsor BMwinsor BIwinsor BHOwinsor MOwinsor IOwinsor B4 FAwinsor FSwinsor FGwinsor GDP

Linear regression, correlated panels corrected standard errors (PCSEs)

Group variable:    Firms                          Number of obs      =       530
Time variable:     Years                          Number of groups   =       106
Panels:            correlated (balanced)          Obs per group: min =         5
Autocorrelation:   no autocorrelation                                 avg =         5
                                                                      max =         5
Estimated covariances      =      5671           R-squared          =    0.1852
Estimated autocorrelations =         0           Wald chi2(13)      =    898.78
Estimated coefficients     =        14           Prob > chi2        =    0.0000
```

STDRwinsor	Panel-corrected Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
BSwinsor	-.0154982	.0033514	-4.62	0.000	-.0220668	-.0089296
BMwinsor	-.0050828	.0062187	-0.82	0.414	-.0172711	.0071056
BIwinsor	-.1503725	.059264	-2.54	0.011	-.2665279	-.0342171
BHOwinsor	.0013997	.0004022	3.48	0.001	.0006115	.0021879
MOwinsor	-.001687	.0001602	-10.53	0.000	-.002001	-.001373
IOwinsor	-.001512	.000301	-5.02	0.000	-.0021019	-.0009222
B4	.0402103	.0117435	3.42	0.001	.0171934	.0632272
FAwinsor	.0029155	.0003001	9.71	0.000	.0023272	.0035038
FSwinsor	.0066884	.0073988	0.90	0.366	-.0078129	.0211898
FGwinsor	.0017583	.0004239	4.15	0.000	.0009274	.0025893
GDP	-.002716	.0013599	-2.00	0.046	-.0053814	-.0000506
INF	-.0002561	.0013517	-0.19	0.850	-.0029054	.0023932
BLR	.001438	.0016862	0.85	0.394	-.0018668	.0047429
_cons	.4872391	.1033613	4.71	0.000	.2846547	.6898236

Appendix K: Robust Analysis

```
. tabstat TDRwinsor TERwinsor LTDRwinsor STDRwinsor, stat (mean median min max sd skewness kurtosis) col(stat)
```

variable	mean	p50	min	max	sd	skewness	kurtosis
TDRwinsor	.5603101	.5540185	.1817792	.9862211	.2215642	.1643836	2.226676
TERwinsor	.4396899	.4459815	.0137789	.8182208	.2215642	-.1643836	2.226676
LTDRwinsor	.1635218	.1231818	0	.4759374	.1449662	.8297303	2.594024
STDRwinsor	.3878877	.3600723	.0814654	.8197854	.2060868	.5094461	2.428361

	TDRwin~r	LTDRwi~r	STDRwi~r
TDRwinsor	1.0000		
LTDRwinsor	0.4189	1.0000	
STDRwinsor	0.7483	-0.2547	1.0000

```
. xtpcse TDRwinsor LTDRwinsor STDRwinsor

Linear regression, correlated panels corrected standard errors (PCSEs)

Group variable:    Firms                      Number of obs      =       530
Time variable:     Years                      Number of groups   =       106
Panels:            correlated (balanced)      Obs per group: min =         5
Autocorrelation:   no autocorrelation                        avg =         5
                                                             max =         5
Estimated covariances      =      5671        R-squared          =    0.9572
Estimated autocorrelations =         0        Wald chi2(2)       =   5011.66
Estimated coefficients     =         3        Prob > chi2        =    0.0000
```

TDRwinsor	Panel-corrected Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
LTDRwinsor	.9961383	.026099	38.17	0.000	.9449851	1.047291
STDRwinsor	.9830293	.0149926	65.57	0.000	.9536444	1.012414
_cons	.0161148	.0060923	2.65	0.008	.0041741	.0280555